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Should it move or should it stay?

How speakers of two Basque dialects organize meaningful elements
in transitive clauses

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Abstract

This thesis investigates word order patterns in spoken Basque for two dialects, Navarrese-Lapurcian and Gipuzkoan. The data for the analysis was elicited with stimuli pictures in an experiment in dialogue form. The 26 participants were from Hazparne (Lapurdi), Donostia, and Andoain (both Gipuzkoa). The data consists of transitive main clauses, both questions and declaratives with nominal subject and object, some uttered in a neutral context, others with a focused subject, and others with a focused object. Every sentence contained 2-4 verbal elements (lexical verb, inflectional auxiliary, *ari*, *saiatu/entseatu*). The data confirmed previous findings: the basic word order of Basque is A O V. The focused NP or WH-word has to be left-adjacent to the verb but this rule can be broken in Navarrese-Lapurcian, where the constituents can also occur in situ. It was also confirmed that Navarrese-Lapurcian speakers use a marked focus, in which the focused NP or WH-word is followed by the auxiliary only. Surprisingly, this pattern was also found for the speakers from Andoain. Moreover, it was found that the variety of orders in which verbal elements can follow the focused NP or WH-word is bigger than assumed. These orders underlie a common pattern: the auxiliary moves to the left of the focused NP or WH-word and can pied-pipe other verbal elements, beginning with the one deepest embedded in the structure of the verb phrase. Pied-piping was found to be optional for the speakers from Hazparne and Andoain but obligatory for the speakers from Donostia. Furthermore, the data indicates in which way the change from obligatory adjacency of focus/WH-word and verb to in situ is about to happen in the Hazparnian dialect. It also shows that both dialects try to be as economical as possible in trying to avoid movements from the underlying word order A O V, where possible. Furthermore it shows that the two dialects are complex in a different way: while the obligatory adjacency of focused NP/WH-word in Gipuzkoan forces certain movements, the Navarrese-Lapurcian dialect is complex as two structures exist parallel to each other.

Keywords: free word order, Basque, Navarrese-Lapurcian, Gipuzkoan, focus, information structure, structural priming, economy, Galdegaia, in situ, pied-piping, markedness, complexity, syntactic movement

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Table of Contents

Acknowledgements	3
Abbreviations	6
List of Tables	7
List of Figures	7
1. Introduction	9
1.1. Outline	10
2. Background	11
2.1. Word order and word order variation	11
2.2. Information structure	13
2.3. Complexity and economy	16
2.4. Structural Priming	18
2.5. Basque	19
2.5.1. Word order and information structure in Basque	20
2.6. Research questions and hypotheses	25
3. Method	26
3.1. Stimuli	26
3.1.1. Experimental design	27
3.1.2. Participants	32
3.2. Data analysis	35
4. Results and discussion	38
4.1. Syntax and information structure	38
4.1.1. Occurring word orders	38
4.1.2. Event-reporting	38
4.1.2.1. Event-reporting questions	38
4.1.2.2. Event-reporting declaratives	39
4.1.3. The two noun phrases	42
4.1.3.1. The order of subject and object	42
4.1.3.2. Topic	45
4.1.3.3. Summary noun phrases	47
4.1.4. Focus and focus pivot	48
4.1.4.1. Basic word order	49

4.1.4.2.	Unified verbal chain as focus pivot.....	53
4.1.4.3.	AUX as focus-pivot/marked construction	56
4.1.4.4.	Cleft-constructions	58
4.1.4.5.	ARI AUX as focus pivot.....	59
4.1.4.6.	SAIATU ARI AUX as focus pivot	61
4.1.4.7.	SAIATU AUX as focus pivot	62
4.1.4.8.	Sentences deviating from the pied-piping pattern	64
4.1.4.9.	Distribution of the pivot-patterns	64
4.1.5.	Verb-final	70
4.1.6.	Object and verb	74
4.1.7.	Placement of the adverbial	79
4.2.	Structural priming.....	82
4.2.1.	Non-neutral word order in event-reporting declaratives	82
4.2.2.	Object preceding subject in declaratives	82
4.2.3.	Cleft-constructions	83
4.2.4.	Superfluous movements.....	84
4.3.	Summary of the results	86
5.	Conclusion	90
	References.....	92
	Appendix.....	95

Abbreviations

A	subject of a transitive clause
ABS	absolute case
A _{FOC}	focused A
A _{WH}	question word asking for A
ADJ	adjectivizer
ADV	adverbial
AUX	auxiliary
COM	comitative case
COMP	complement (suffix indicating a subordinate clause)
COP	copula
Don	Donostian dialect
ERG	ergative case
FOC	focus
GEN	genitive case
Haz	Hazparnian dialect
IMPF	imperfective
INF	infinitive
LOC	locative case
NP	noun phrase
O	object
O _{FOC}	focused O
O _{WH}	question word asking for O
Op	operator
PL	plural
PRED	predicative
S	subject of an intransitive clause
SAI	<i>saiatu/entseatu</i>
SG	singular
V	lexical verb
VP	verb phrase
WO	word order
*	ungrammatical/reconstructed form
%	grammatical for some speakers

List of Tables

Table 1: Distribution of dominant word orders on WALS	12
Table 2: Absolute and ergative case of a definite noun in Basque	20
Table 3: Lexical verbs in stimuli	32
Table 4: Recorded tasks.....	35
Table 5: Possible and occurring orders	38
Table 6: Occurring word orders for event-reporting declaratives	41
Table 7: A>O in the underlying word orders	44
Table 8: Use of saiatu/saiatu + ari	63
Table 9: Sentences containing cleft-constructions.....	84
Table 10: Event-reporting questions and answers.....	102
Table 11: Sentences with focused subject	102
Table 12: Sentences with focused object.....	102
Table 13: All word orders sorted by categories.....	103
Table 14: Sentence-final elements	106

List of Figures

Figure 1: The Basque provinces.....	19
Figure 2: Example to elicit a question in pilot 1	27
Figure 3: Example stimuli from pilot 2	28
Figure 4: Stimuli for a question asking for the object (pilot 3).....	29
Figure 5: Stimuli for the answer to Figure 4	29
Figure 6: Stimuli for an event-reporting question.....	30
Figure 7: What language do you speak best?.....	33
Figure 8: Which language(s) do you speak with your parents?	34
Figure 9: Which dialect do you speak?.....	34
Figure 10: Word order in event-reporting questions.....	39
Figure 11: Simplified word order in event-reporting declaratives	39
Figure 12: Word orders in event-reporting declaratives by verbal patterns	40
Figure 13: Word order A O V (SAI) (ARI) AUX in event-reporting declaratives	40
Figure 14: A>O in sentences containing a focused NP/WH-word.....	43
Figure 15: A>O in sentences with A-operator	43
Figure 16: A>O in sentences with O-operator.....	44
Figure 17: Topic position in questions.....	46
Figure 18: Topic position in declaratives	47
Figure 19: Use of basic word order in sentences with focused object.....	51
Figure 20: Use of basic word order in sentences with focused subject	52
Figure 21: Unified verbal chain as focus pivot.....	55
Figure 22: Percentage of sentences with the unified verbal chain as focus pivot	55

Figure 23: Unified verbal chain in Donostian and Hazparnian sentences with focused object/subject.....	56
Figure 24: aux as focus pivot	56
Figure 25: Percentage of AUX-pivot	57
Figure 26: ari aux as focus pivot	60
Figure 27: Percentage of the ARI-AUX-pivot in sentences containing ari	60
Figure 28: saiatu ari aux as focus pivot	61
Figure 29: Percentage of the SAI-ARI-AUX-pivot in sentences containing saiatu and ari	62
Figure 30: saiatu aux as focus pivot.....	62
Figure 31: Distribution of the SAIATU-AUX-pivot in sentences containing saiatu.....	63
Figure 32: Additional movement of saiatu as in (68)	66
Figure 33: Distribution of pivot patterns.....	67
Figure 34: Distribution of pivot patterns on verbal elements.....	68
Figure 35: Verb-final sentences.....	70
Figure 36: V-final in different verbal patterns.....	71
Figure 37: V-final in declaratives and questions for different pivot patterns	72
Figure 38: V-final in declaratives/questions with unified verbal chain for A/O-operator	72
Figure 39: V-final in declaratives/questions with unified verbal chain for the dialects.....	72
Figure 40: Movements as in (74).....	73
Figure 41: OV direct.....	74
Figure 42: OV direct for sentences with A-operator	75
Figure 43: OV direct for sentences with O-operator.....	77
Figure 44: V in focus pivot in sentences with ari and/or saiatu	79
Figure 45: Position of adverbials for sentences with a focused NP	80
Figure 46: Structural priming of O>A order.....	83
Figure 47: Superfluous movement of saiatu	84
Figure 48: Superfluous movement of the lexical verb	84
Figure 49: Two superfluous movements (V and saiatu).....	85

1. Introduction

While speaking, a speaker has to make many choices in a very short time. He or she has to decide which lexical items to use, which morphemes to attach to them, how to order them, and how to pronounce them. The possibilities for how to express a thought are virtually unlimited. It is surprising how speakers can obtain fluency in speech and still manage to communicate more or less complex contents, while at the same time producing relatively few errors.

Regarding word order, the possibilities are logically limited and in many languages restricted by language-specific syntactic rules. Another important factor influencing word order is information structure, defining what a sentence is about, creating coherence in a text, and permitting the speaker to emphasize certain parts of the sentence. Other influential factors are universal tendencies and psycholinguistic factors, such as for example the intention to use as little energy as possible in order to achieve the optimum results.

By means of a case study, I investigated how these factors influence word order and how they interact with each other.

For this purpose, I chose Basque, a language with very flexible word order in which information structure is expressed in syntax. In the present study, two Basque dialects, Gipuzkoan and Navarrese-Lapurcian are investigated and contrasted to each other. The study investigates positive, transitive main clauses collected in an experimental setting in field work in the Basque Country.

The present study is data-driven. As I want to describe the occurring variation in the simplest and most comprehensible way possible, I chose not to position this study in a specific theoretic framework. I use some terminology originating from Government and Binding Theory (cf. e. g. Chomsky 1981) in a pre-theoretic way as a descriptive tool but do not position the study in any generative framework as not all observed variation can be straightforwardly described in such a framework without further stipulation.

The main research questions are:

- How do different factors of syntax and information structure interact with each other?
- Which role do factors of parsing economy play?

It would have been very interesting to include phonological and prosodic features in this study. Due to the limited framework of this thesis, this has unfortunately not been possible.

1.1. Outline

In chapter 2, some basic assumptions will be introduced. First, an introduction to word order and word order variation is given in section 2.1, then the notions of information structure are presented in 2.2. Sections 2.3 and 2.4 introduce the concepts complexity, economy, and structural priming, while section 2.5 gives an overview of the Basque language, centering on its word order and information structure. The research question and hypotheses are introduced in section 2.6.

In chapter 3, I will describe the experiment used to elicit the data for this study and provide background information about the participants (3.1.2).

The results are presented and discussed in chapter 4 and summarized in section 4.3.

Chapter 5 provides a conclusion and suggestions for further studies.

2. Background

2.1. Word order and word order variation

Word order plays a major role in the typological classification of languages. Typology aims at finding language universals (features shared by all or a majority of languages) and variation among the languages of the world. The typological study of word order was mainly shaped by Joseph H. Greenberg who investigated “some universals of grammar with particular reference to the order of meaningful elements” (Greenberg 1963). The order of *words* or *meaningful elements* can refer to the order of nouns respective to adjectives, adpositions, relative clauses etc., to the order of possessor and possessive, or to the order of constituents like subject, object, verb, and adverbials. This thesis focuses on the latter. The term *constituent order* might seem more appropriate as a subject or object can consist of more than one word, but I will continue to use the term *word order*, as the ordering of different verbal elements will also play a major role for the investigation of Basque.

When only looking at the major constituents *subject* (A)¹, *object* (O), and *verb* (V) in a transitive clause, there are six logically possible word orders: A O V, A V O, V A O, V O A, O A V and O V A.

In most languages, several of these orders are possible. In a language like English, the basic word order is A V O as in (1a), while other word orders like the one in (1b) are only used in very specific contexts. Other orders such as (1c) are not possible at all. English is therefore called a language with *rigid word order* (Dryer 2013a). The rigid order is necessary in English, as grammatical relations are almost only manifested in word order.

- (1) a. The children love the toys.
b. The toys, the children love.
c. *Love the toys the children.

In other languages, morphology is used to express grammatical relations and the word order is less restricted, as for example in Russian, which has a *flexible word order* (ibid). Flexible word order is sometimes also referred to as *free word order*, which can lead to terminological confusion, as the term *free word order* is also used for languages for which no basic word order can be determined.

However, for most languages it is possible to define a basic or dominant word order. It can be defined by frequency, i.e. how often this word order is used in the language, or by a phenomenon called *pragmatic neutrality*, which is introduced in section 2.2.

When Greenberg (1963) carried out his study about the distribution of the six constituent orders, he used a sample of 30 languages. This led among others to his first universal:

¹ In line with Dixon (1994:6), I use A for the subject of a transitive clause, S for the subject of an intransitive clause, and O for the object of a transitive clause.

“Universal 1. In declarative sentences with nominal subject and object, the dominant order is almost always one in which the subject precedes the object. This leaves us with three common types: VSO, SVO, and SOV.” (Greenberg 1963:4)

In the World Atlas of Language Structures Online (WALS) the study was replicated with 1,377 languages (Dryer 2013a). Even though there is now more data for languages representing the three rarer orders VOA, OVA, and OAV, the tendency Greenberg found does still hold, as can be seen from Table 1:

*Table 1: Distribution of dominant word orders on WALS
(Dryer 2013a)*

Word order	Number of languages
SOV	565
SVO	488
VSO	95
VOS	25
OVS	11
OSV	4
No dominant order	189

When comparing languages, typologists focus on the dominant order, try to find patterns among languages, and map out the variation between languages. Word order variation, however, also exists within a language. In German, for example, different word orders are used for main and subordinate clauses. In a main clause, the word order is A V O (2a) or A Aux O V (2b), while it is A O V (Aux) in a subordinate clause (2c/d):

- (2) a. Der Hund holt den Stock.
DEF dog fetch.3.SG DEF stick
 The dog fetches the stick.
- b. Der Hund kann den Stock holen.
DEF dog can.3.SG DEF stick fetch.INF
 The dog can fetch the stick.
- c. Ich will, dass der Hund den Stockholt.
1.SG want.1.SG that DEF dog DEF stick fetch.3.SG
 I want the dog to fetch the stick.
- d. Ich will, dass der Hund den Stock holen kann.
1.SG want.1.SG that DEF dog DEF stick fetch.INF can.3.SG
 I want the dog to be able to fetch the stick.

In English, the word orders of declaratives and questions differ from each other. The question word has to be sentence-initial, i.e. the WH-word moves to the front. This movement can even trigger other movements: the WH-word can drag prepositions to the first position. This operation, as exemplified in (3) is called pied-piping². Pied-piping is optional in English WH-questions.

- (3) a. Sally gave the book **to Max**.
 b. **Who** did Sally give the book **to**?
 c. **To whom** did Sally give the book?

The term MOVEMENT has in many theories been used to describe deviations from the basic (or underlying) word order. These theories include transformational grammar, the Minimalist Program (Chomsky 1993),

² This term is introduced in Ross (1967) and describes the pulling of other elements through an element which is moved.

Government and Binding Theory (Chomsky 1981) etc. In the following, I use *movement* in a pre-theoretic way and look at word order variation as changes of a linear order as i.e. in Drach's (1937) topological view of sentence structure. I chose this way of description as only some of the observed movements could be placed straightforwardly in the existing theories. WH-movement is clearly an instance of A'-movement, but the attested types of movement of parts of the verb phrase (including the auxiliary verb itself, often the verb, but never the arguments) described in 4.1.4, appear to be reminiscent of head movement, in that heads (verbs and auxiliaries) are involved, but do not behave like head movement in the sense of Travis (1984), since they involve what appears to be pied-piping of other heads, without affecting the arguments of these heads. To design a model which could combine the properties of head-movement with optional pied-piping would presumably imply working with some kind of excorporation. This would be beyond the scope of this study.

As exemplified in (1) above, language-internal variation can also be triggered by pragmatic processes which are described within the field of information structure.

2.2. Information structure

Information structure is concerned with how information is organized in a clause, sentence, text, or discourse. According to Lambrecht (1994:1), it "is concerned with the relationship between linguistic form and the mental states of speakers and hearers". This means that when analyzing information structure, one has to take in account both the communicative situation (i.e. the mental state of at least one speaker and one hearer) and the "linguistic form" which can be manifested in prosody, morphology, lexicon, word order, and complex grammatical constructions.

Within information structure, Daneš (1966) introduces the term *allosentences*, i.e. sentence sets in which the same information is organized differently, as in (4):

- (4) a. The dog bites Peter.
b. Peter is bitten by the dog.
c. It is the dog that bites Peter.

The proposition communicated by the three sentences is the same but there are huge differences in how the bits of information are organized. The constructions used as examples here are active (4a), passive (4b), and cleft (4c).

Most readers will agree that (4a) is the 'normal' construction. It is syntactically least complex and often referred to as the *neutral* or *unmarked* word order. MARKEDNESS is an important notion in information structure, and Lambrecht (1994:17) defines it as follows: "one member [of a set of allosentences] is pragmatically unmarked if it serves two discourse functions while the other member[s] serves only one of them."

(4a) can be regarded as a description of the state of affairs, the answer to the question 'What happens?', referred to as *event-reporting* by Lambrecht. It can also be the answer to the question 'Whom does the dog bite?'. The other two sentences can only answer one single question, namely 'Who is bitten by the

dog?’ (4b) and ‘Who is it that bites Peter?’ (4c). This means that (4a) can be used more broadly than (4b) and (4c). It is therefore *less marked* than the other examples. Sentences such as (4a) can be used in different situations, while the more marked sentences can only be used in a specific context. This also leads to a “greater overall frequency” of the unmarked structure (ibid).

The examples above show that a sentence and the information it contains can be divided into different parts: some parts of the proposition are *emphasized*, while others are not. Within the study of information structure, numerous suggestions have been made to name the different bits of information, however, “there is no consensus on what and how many categories of information structure should be distinguished, or how these can be identified.” (Büring 2007:1). Most linguists have been using dichotomies such as *old* and *new*, *known* and *unknown* information, *topic* and *focus*, *topic* and *comment*, *theme* and *rheme*, *focus* and *background*, etc. (cf. Molnár 1998:89).

I will base this study on Lambrecht’s (1994) terminology. The main notions I will use are TOPIC and FOCUS.

The term *topic* is closely related to *topic* as it is used in everyday language. The topic of my master’s thesis is ‘word order in Basque’ and we could also say that this thesis is ABOUT word order in Basque. This notion can be transferred to clause-level:

“A referent is interpreted as the topic of a proposition if in a given situation the proposition is construed as being about this referent, i.e. as expressing information which is relevant to and which increases the addressee’s knowledge of this referent” (Lambrecht 1994:131)

If we go back to example (4a), we can say that this sentence is *about* the dog. This is true only in a certain context, i.e. when the preceding question is ‘What does the dog do?’. The speaker increases the hearer’s knowledge about the dog when answering ‘The dog bites Peter.’, i.e. *the dog* is the topic of the sentence. The rest of the sentence, i.e. the information which is given about the topic, is called COMMENT.

In this example, the topic of the sentence is also the grammatical subject. In many languages there is “evidence for the strong correlation between subject and topic” (Lambrecht 1994:131). According to Lambrecht, this correlation evolves as the unmarked word order A V O (taking English as an example), is mostly interpreted as a topic-comment structure (ibid:132). This is connected to the fact that the topic-comment structure is most frequent in communicative situations, but also that both subject and topic tend to occupy the first position in a clause in many languages (ibid:136). However, it is important to note that even if topic and subject are closely connected notions in the speakers’ mind, “subjects are not necessarily topics” and “topics are not necessarily subjects” (ibid:142). In fact, several constituents can be topic, as (5) exemplifies. In the last sentence, both the object *the product* and the subject *I* are topic.

(5) Why am I in an up mood? Mostly it’s a sense of relief of having finished a first draft of my thesis and feeling OK at least about the time I spent writing this. The product I feel less good about.

Example from Lambrecht 1994:147

Moreover, there are also EVENT-REPORTING sentences. These sentences do not give information about a certain referent but they inform about a situation and are therefore also called “out of the blue” (ibid:124). When the first example (The dog bites Peter.) is uttered ‘out of the blue’ it answers the question ‘What happens?’.

As already mentioned, topic is encoded in word order in English (and many other languages), as the first constituent of a sentence. In Japanese, however, there is a special topic marker *wa*.

- (6) a. What's the matter? KUBI ga ITAI. (My NECK hurts)
 b. How's your neck? Kubi wa ITAI. (My neck HURTS)

Example from Lambrecht 1994:137

The notion in information structure that will play the most important role in the following discussion is FOCUS. In everyday language, *focus* is something one concentrates on. The term *focus* is also used in phonology where it refers to accent placement. In information structure, focus is often equaled with new information or “the information in the sentence that is assumed by the speaker not to be shared by him and the hearer” (Jackendoff 1972:239, as cited in Lambrecht 1994:207).

According to Lambrecht, however, focus and new information cannot be equaled. Consider example (7):

- (7) a. Who eats the apple? b. Jane eats the apple.

When a speaker asks the question (7a), she presupposes that somebody eats the apple. [X eats the apple] is therefore called a PRAGMATIC PRESUPPOSITION by Lambrecht. It seems logical to conclude that *Jane* is new information, the information the speaker of (7b) assumes the hearer (the one that asked the question) does not know. However, Lambrecht emphasizes that not the constituent itself is the new information (Jane is probably known by both speaker and hearer), but the relation of the constituent to the presupposition [X eats the apple]. This relation can be schematized with [X = Jane] which Lambrecht calls an ASSERTION. The new information is not *Jane* but [X = Jane], i.e. the abstract proposition that Jane eats the apple. Lambrecht calls this the FOCUS RELATION. The constituent *Jane* “supplies the missing argument in the open proposition” (ibid:211) and transforms the sentence to new information. The focus is the “unpredictable” and “non-recoverable” element of the utterance (ibid:207), but it does not have to be new.

As there are sentences with several topics, sentences with several foci are possible as well. A possible communicative situation would be (8):

- (8) a. When did who go to the theater? b. JOHN did go to the theater YESTERDAY.

As indicated by the capital letters, focus is mostly expressed phonologically in English. In other languages, the focus is related to a specific position in a sentence. In Russian, for example, the focus is mostly in final position (King 1995:81). In Hungarian, Basque and some other languages (É. Kiss 1995:20), the focus has to be left-adjacent to the verb. The information structure of Basque will be described in more detail in section 2.5.1.

It is important to note that FOCUS and TOPIC are not dichotomous. There is a dichotomy of TOPIC and COMMENT as explained above and the FOCUS is the *unpredictable* part of the comment that makes the comment to new information about the topic.

The rest of the comment, the information which is neither in the function of a focus, nor a marked topic, will be referred to as TAIL, following Ortiz de Urbina (2003:461).

2.3. Complexity and economy

The preceding two sections described rules regulating language use: Word order as a clause-internal regulation, i.e. indicating grammatical relations, and information structure which sets the utterance in a context. This shows that the variation occurring in word order is by no means random, but that every choice has a function.

However, the rules and functions are not set by an external force but shaped by language use. The language users' intention is not to construct a complex system of rules; their intention is to communicate as efficiently as possible and to keep the system as simple as possible, without running the risk that misunderstandings arise. This can be seen as a cost-benefit calculation where cost is defined as

“the amount of resources — in terms of energy, money or anything else — that an agent spends in order to achieve some goal. What we can call cost-benefit considerations are certainly of central importance in explaining many aspects of communicative behaviour.” (Dahl 2004:39)

Similarly, Vicentini writes that

“economy in language has a strong controlling function over the whole system, something which is carried out with the least possible cost in terms of energy.” (Vicentini 2003:37)

Economy implies that a structure or expression “should be minimized where possible” (Croft 1990:102), i.e. should be reduced when more ‘work load’ does not give any benefit, in the form of additional information. According to Croft, “the concept [of economy] extends far back in linguistic theory, and is manifested in a number of different theories.” (ibid). One example of theories that use this concept is generative grammar:

“Economy condition is an important theme in recent generative grammar principle which states that syntactic representations should contain as few constituents and syntactic derivations and involve [sic] as few grammatical operations as possible.” (Razaghi et al. 2015:2)

Economy can be applied to all fields of linguistics. Already in 1935, Zipf showed that words that are used frequently contain fewer phonemes than words that are used less frequently (Zipf 1935 [1965]:28) and comes to the conclusion that “high frequency is the cause of small magnitude” (ibid:29).

As for lexical items, a relationship between frequency and complexity can also be found for word order. The basic word order is most frequent, not only in tokens (number of occurrences) but also in types (number of contexts in which the word order can be used), and can therefore also be regarded as the simplest one. All other word orders emerge from the basic word order, taking the basic word order as a starting point. Complexity in word order is often described by the number of movements that elements undergo: “there is some consensus on the idea that not moving is computationally simpler than moving” (Duguine & Irurtzun 2014:25). This agrees with Dahl's definition of complexity: “the complexity of a concept should be directly correlated to the length of its definition.” (Dahl 2004:45). This means that all word orders that are derived from the basic word order by movements are more complex and also that they occur less frequently than the basic word order itself. This leads to a circular process: as simpler constructions are used more frequently than complex ones, they are also heard more often by the

speakers and are therefore easier to process and to produce – which makes it more probable for speakers to use them, therefore increasing their frequency, and so on.

The principle of economy can also be observed for language change; one example being the loss of inflection in e.g. English. Vicentini states that “this evolution is the result of phonological, morphological, syntactic and lexical modifications and reorganizations that can be interpreted in the light of linguistic economy. The structure of the language has gone through several changes and adaptations in order to attain the best possible communication.” (2003:51). English morphology has become less complex as the speakers succeeded to express the same information with less cost (it is another story that other parts of grammar (i.e. word order) had to compensate for the loss of complexity in morphology).

It is important to keep in mind that even extensive changes in language emerge from concrete communicative situations:

“In the long run, agents will tend to employ only such signals as have a positive cost-benefit balance. Signals, however, may be complex, and human linguistic utterances typically are. For each part of the signal, a separate cost-benefit calculation can be made, at least in principle. In a certain communication situation, some signal element may well turn out to be dispensable without any detrimental effect on the information conveyed — its cost-benefit balance is negative. Agents will tend to spend less time and energy on such redundant parts of a signal, which puts the transmission of the element to new generations at risk, whether the transmission mechanism is cultural or genetic.” (Dahl 2004:60)

This means that language can be seen as an economic system both synchronically and diachronically. Speakers are striving in each utterance to spend as little energy as possible, and language as a whole will also change towards a more economic system – adapted to the needs of its speakers.

2.4. Structural Priming

One way of using language economically is to re-use previously uttered or heard structures. This tactic has become known under the term STRUCTURAL PRIMING which was coined by Bock (1986). In several experiments, she proved that “activation processes play an important role in controlling the syntax of speech” (ibid:383). In cases where a speaker had the choice between two semantically identical syntactic structures, e.g. passive and active, the speaker was more likely to produce a sentence with the same structure activated by a preceding utterance, even if this structure is less frequent in general; “if a speaker produces or even simply hears an utterance with a particular structural form, he or she is likely to mimic that structure in a subsequent utterance” (Ferreira & Engelhardt 2006:65).

Since the phenomenon was first described, numerous studies about structural priming and priming effects have been conducted. Priming effects could be found for various levels of speech production, among others word order (Hartsuiker & Westenberg 2000, Hartsuiker et al. 1999) and information structure (Benolet, Hartsuiker & Pickering 2009). Structural priming has effects both within a language as well as across languages (cf. Loebell & Bock 2003, Benolet, Hartsuiker & Pickering 2009). Its effects were found to be “considerably enhanced by the addition of lexical repetition” (Pickering and Branigan 1998, as cited in Loebell & Bock 2003).

Structural priming has been explained as a “byproduct of practice” (Loebell & Bock 2003:793) and a “form of learning” (ibid:810) and has even been found in very young children (Brooks and Tomasello 1999). It can change “the fluency or efficiency of the operations themselves” (Cohen and Eichenbaum 1993, as cited in Loebell & Bock 2003).

In this way, structural priming facilitates the process of speech production, in making it more efficient as the speaker does not have to formulate every sentence from scratch, but uses the structure or parts of it from recently heard or spoken sentences. This effect is part of the circular process described above: a frequently heard structure is more active in a speaker’s mind and therefore processed and produced more easily, leading to a higher frequency of occurrences in speech.

2.5. Basque

Basque, or EUSKARA, as it is referred to by its speakers, is a language spoken in the Basque Country, an area expanded over seven provinces, whereof three (Lapurdi, Nafarroa Beherea and Zuberoa) are situated in French and four (Bizkaia, Araba, Gipuzkoa and Nafarroa) in Spanish territory. The three northern provinces are often referred to as IPARRALDE (Northern side), while the four southern provinces are referred to as HEGOALDE (Southern side). While Basque has an official status in the Autonomous Community of the Basque Country (consisting of the provinces Bizkaia, Araba and Gipuzkoa), and partly in Nafarroa, it does not have any official status in France (Hualde 2003:2), leading to a significantly weaker status of the language in Iparralde. Today, Basque is spoken by approximately 700 000 speakers (Hualde 2003:3), nearly all of which are bilingual Basque-Spanish or Basque-French.



Figure 1: The Basque provinces

(<http://basque.unr.edu/arts/dance/pages/regions.htm>)

A big dialectal variation exists, and “some difficulties in communication can arise even between speakers of varieties spoken over relatively short distances” (Hualde 2003:3). The dialects are often divided into two main varieties: the northern dialects and the southern dialects, divided by the (political) border between France and Spain.

In 1968, a standardized variety of Basque was introduced: it is referred to as EUSKARA BATUA (Unified Basque) and is used in education and media today. As some Basque speakers that have learned Basque in school are now raising their children in this language, there are now even native speakers of Batua (Hualde 2003:6). Most modern standard grammars describe Batua.

There have been many attempts to find a genetic relationship to other languages but none of these has been proven to date (Hualde 2003:12f.). Basque is therefore regarded as a language isolate.

Basque is an agglutinative language (Bezares Roder 2006:3). It is also an ergative-absolutive language, i.e. the subject of a transitive clause (A) is in ergative case while the subject of an intransitive clause (S) and

the object of a transitive clause (O) are in absolutive case. The case ending is attached to the noun phrase as can be seen in (9), not to every element of the noun phrase as this is the case in e.g. Russian.

Table 2: Absolute and ergative case of a definite noun in Basque
(King 1994:354)

Function	Case	Singular	Plural
O and S	Absolutive case	-a	-ak
A	Ergative case	-ak	-ek

- (9) a. Mutiko-ak b. Mutiko txiki-ak
 boy-ABS.PL boy little-ABS.PL
 The boys The small boys

Most of the Basque verbs are analytical; they consist of a participle of a lexical verb and an auxiliary in this order (e.g. *joaten naiz* 'I go', *jakingo dut* 'I will know it')³, in accord with Greenberg's universal 16 (1963:67): "In languages with dominant order SOV, an inflected auxiliary always follows the main verb". Some verbs, however, are synthetic, i.e. consisting of an inflected lexical verb (e.g. *noa* 'I am going', *dakit* 'I know it')⁴. While almost all verbs permit analytical forms, "not much more than a dozen" verbs have synthetic forms (De Rijk 1978:185). Synthetic verbs are "least common in spoken Basque" (Bezares Roder 2006:13).

The verb (in most cases the auxiliary) agrees in person and number with three constituents: subject, direct object, and indirect object (De Rijk 1978:186), that means with complements in absolutive, ergative and dative case. Moreover, there is an allocutive agreement, which means that the verb agrees with the gender of the addressee, "when the addressee is given familiar treatment" (Hualde, Ortiz de Urbina & Oyharçabal 2003:248ff).

Two different auxiliaries are used to form analytical verbs: *izan* is chosen in intransitive sentences, while the auxiliary **edun* is chosen in transitive sentences⁵. Besides the inflectional auxiliary, there is also an auxiliary *ari* expressing progressive aspect, and as well several modal auxiliaries. In clauses with *ari* or the auxiliaries *saiatu* (try) and *hasi* (begin), the intransitive auxiliary *izan* is used even in transitive clauses, and both the subject and the object are in absolutive case (cf. De Rijk 2008:386). However, in the Navarrese-Lapuradian dialect *ari* can either be used with the transitive auxiliary **edun* and the object in absolutive case or the intransitive auxiliary *izan* and the object in genitive case (Lafitte 1944 [2001]:351).

2.5.1. Word order and information structure in Basque

Basque is a head-final language with possessor-possessive order, noun-demonstrative order, postpositions, and relative clause-noun order. With the combination of these features, Basque is a type III language according to Greenberg's categorization (De Rijk 1978:188, Greenberg 1963). However, the adjective follows the noun.

³ Examples from Hualde, Oyharçabal & Ortiz de Urbina 2003:201

⁴ Examples from Hualde, Oyharçabal & Ortiz de Urbina 2003:201

⁵ The form **edun* is reconstructed as there is no participle form of this verb in modern Basque (Laka 1996:96). The dictionary form for Basque verbs is the participle as these are used as infinitives.

As Basque has a case system, grammatical relations do not have to be encoded in word order. The word order in Basque is thus very flexible and the constituents subject, object, and verb can occur in any of the six possible orders (cf. (10)). Moreover, the order of other constituents such as indirect object and adverbials is free as well, i.e. even more orders are possible for (10). The basic word order is (10 d).

- (10) a. Atzo il zituen bost txerri txistulari batek Legazpi'n. (V O A)
 Yesterday kill AUX five pig flute-player one.ERG Legazpi.LOC
 Yesterday, one flute-player from Legazpi killed five pigs.
- b. Atzo bost txerri il zituen txistulari batek Legazpi'n. (O V A)
- c. Atzo il zituen txistulari batek bost txerri Legazpi'n. (V A O)
- d. Atzo txistulari batek bost txerri il zituen Legazpi'n. (A O V)
- e. Atzo bost txerri txistulari batek il zituen Legazpi'n. (O A V)
- f. Atzo txistulari batek il zituen bost txerri Legazpi'n. (A V O)

Example from De Rijk 1969:17, cited as given

However, A O V has been found to be the “statistical [sic] predominant order” (De Rijk 1978:188, cf. also De Rijk 1969, Ortiz de Urbina 2003:454). It is also, according to Laka (1996:8), the word order used in a neutral context, answering the question ‘What is happening’ or when “no constituent is emphasized for contrastive or emphatic purposes over the others” (Etxepare & Ortiz de Urbina 2003:460), i.e. an event-reporting declarative with Lambrecht’s words. Laka schematizes the neutral word order as in (11):

(11)[Ergative] [Dative] [Absolute] [verb + inflection]

This means that Basque does not belong to the ‘free’ word order languages when ‘free’ is defined as “not possible to determine a basic word order”, but rather to the languages with flexible word order, in which various deviations from the basic word order are permitted in a non-neutral context.

However, the word order of non-neutral sentences is not completely free either. The most important rule is the so-called *Galdegaia*-rule, *Galdegaia* meaning “the questioned thing” (Bezares Roder 2006:26). According to this rule, “foci⁶ (and wh-words) immediately precede the verbal element.” (Etxepare & Ortiz de Urbina 2003:460). For this reason, the question-answer-pair in (12) is grammatical, while (13) is not.

- (12) a. Nork ikusi du Miren? b. Jonek_{Foc} ikusi du Miren.
 who.ERG see AUX Miren.ABS Jon.ERG see AUX Miren.ABS
 Who saw Miren? Jon saw Miren.
- (13) a. *Nork Miren ikusi du? b. *Jonek_{Foc} Miren ikusi du.
 who.ERG Miren.ABS see AUX Jon.ERG Miren.ABS see AUX
 Who saw Miren? Jon saw Miren.

Examples from Duguine & Irurtzun 2010:105

⁶ Important works on the focus in Basque include Etxepare 1997 and Arregi 2011. While these works focus on explaining the function of the focus and try to place the focus in existing syntactic theories, the goal of this study is to map out existing variety in word order and find how different factors influence word order.

In a sentence with focused object or a question asking for the object, the word order corresponds to neutral word order, cf. 14. This means that neutral word order in Basque meets the criteria for basic word order not only in the sense that it is used for event-reporting, but also in the sense that the same word order is used in different contexts. It can also be used for sentences with focused object (but not for sentences with focused subject).⁷

- | | | | |
|---------|--------------------------|----|--------------------------------------|
| (14) a. | Jonek nor ikusi du? | b. | Jonek Miren _{Foc} ikusi du. |
| | Jon.ERG who.ABS see AUX? | | Jon.ERG Miren.ABS see AUX. |
| | Whom did Jon see? | | John saw Miren. |

The entity of focus/question word and verb “can be described as clause-initial since any elements occurring to their left are interpreted as topics or scrambled material” (Etxepare & Ortiz de Urbina 2003:460). The elements left of the operator-verb pair⁸ are in topic position, “spelling out part of the informational ground of the sentence” (Etxepare & Ortiz de Urbina 2003:461), which is comparable to the notion of aboutness as defined in 2.2. Furthermore, topics can be identified prosodically, as “they are usually separated from the rest of the clause to their right by a pause and/or a rise in intonation” (ibid).

Constituents to the right of the operator-verb pair “do not function as marked topics, although they usually represent old information [...] they differ from right-field constituents in that tails cannot be used as contrastive topics.” (ibid). Any information occurring in the tail, i.e. right of the operator-verb-pair is hence neither topicalized nor focalized (according to the definition given in 2.2).

An information structural interpretation of the sentence word order in Basque is therefore (15), resulting in a second basic word order structure, existing parallel to the basic word order A O V.

(15) (Top) Op-V Tail

As mentioned above, the Basque verb mostly consists of at least two elements: the participle of a lexical verb V and an auxiliary AUX. In the basic word order these appear in the order V AUX and this also applies when occurring right of a focused argument or WH-word (cf. (12) above). Even if the word order in Basque is very free, these two verbal elements cannot be separated (Laka 1996:10) which Lafitte (1944 [2001]:44) also notes for the Navarrese-Lapuradian dialect: “Cependant il y a des *limites* dans cette liberté de construction. Par exemple : **maite Piarres du Paulok** [love.IMPF Peter.ABS AUX Paul.ERG] ne veut absolument rien dire⁹”.

However, in northern dialects, the reverse order AUX V can be found as well (Lafitte 1944 [2001]:47, Etxepare & Ortiz de Urbina 2003:472, Duguine & Irurtzun 2010:116), see (16):

⁷ It is especially interesting that this distribution corresponds to the distribution in other languages, e.g. English, where the focus is expressed prosodically: *Neutral*: What happened? The dog bit PETER. *Focused object*: Whom did the dog bite? The dog bit PETER. *Focused subject*: Who bit Peter? The DOG bit Peter.

⁸ ‘operator’ is here used for a focused argument/question word, following Etxepare & Ortiz de Urbina (2003). *Focal operator* will in the following be used to refer to a focused noun phrase while *interrogative operator* will be used to refer to a question word.

⁹ “Nevertheless, there are some *limits* to this freedom of construction. For example: **maite Piarres du Paulok** [love-IMPF Peter-ABS AUX Paul-ERG] does not mean anything at all.”

(22).

- (22) a. Nor da etorri dena? b. Jon da etorri dena.
who.ABS AUX come AUX.COMP.DET Jon AUX come AUX.COMP.DET
Who is it that has come? It is John who has come.

Example from Duguine & Irurtzun 2010:111

Duguine & Irurtzun (2010) show that the semantics of the cleft-construction and the marked construction closely resemble each other.

To summarize, there are three different strategies in Basque to focus an argument. In all of these constructions, the focused argument is immediately followed by either the whole verbal complex or by the auxiliary. The three constructions are as follows:

1. The standard¹¹ construction in which the focused argument is followed by V AUX and which is less marked than the two other constructions
2. The marked construction, specific for the Navarrese-Lapuradian dialect, in which the focused argument is followed by AUX ... V
3. The cleft-construction formed by a relative clause, semantically similar to the marked construction

To complicate matters even more, Irurtzun and Duguine (2014) identified an innovation in the Navarrese-Lapuradian dialect in which the focused argument or question word is not necessarily preverbal, but in which the AOV-word order is maintained even if the subject is focused, i.e. the question word or focused constituent appears IN SITU. Using this strategy, (13), repeated as (23) below, is grammatical.

- (23) a. % Nork Miren ikusi du? b. % Jonek Miren ikusi du.
= (13) who.ERG Miren.ABS see AUX Jon.ERG Miren.ABS see AUX
 Who saw Miren? Jon saw Miren.

Duguine and Irurtzun (ibid:4) describe this as a phenomenon typical for young speakers; the sentences are even “judged ungrammatical by older speakers of Lapurdian Basque and by all speakers of other dialects in Southern Basque Country” (ibid). The new strategy is said to have emerged out of a combination of factors, which include “(i) the abundance of structurally ambiguous wh-questions in the primary linguistic data, (ii) the change in the sociolinguistic profile of bilingual Basque-French speakers, and (iii) an economy bias for movementless derivations.” (ibid). These newly emerged constructions coexist with the standard strategy (ibid:6).

Interestingly, Etxepare & Ortiz de Urbina (2003:522) mention that “objects may intervene between a wh-word or focus and the verb, producing sentences marginally better than those involving other cases of lack of adjacency.”, without referring to a specific dialect. This means that sentences like (23) could

¹¹ The terms *standard* and *marked* follow Duguine & Irurtzun (2010) (there as *construction standard* and *construction marquée*)

possibly occur in other dialects, but while they are a grammatical innovation in Navarrese-Lapurcian Basque, they are only “marginally better”, i.e. exceptions in other dialects.

2.6. Research questions and hypotheses

The aims of this thesis are to map out word order variation within the two investigated Basque dialects, to find out what factors influence the choice of word order in spoken production, and to determine how great the differences between the two investigated dialects are.

It is not expected that strict rules can be determined, but rather that a set of tendencies can be found: “scientific explanations are increasingly formulated not in terms of one or a few causes but rather in terms of a set of factors that enhance or diminish the probability that a certain kind of event will take place.” (Dahl 2004:61).

The explanations are expected to be found on three levels:

1. The clause-internal level (syntax)
2. The context-dependent level (syntax and information structure)
3. The mental/psychological level (information structure and other psychological factors like economy and structural priming)

While clause-internal and context-dependent factors can be discerned in the data, mental or psychological reasons are much more complex and more difficult to detect.

The concrete factors I assume to play a role are:

1. Information structure/syntax:
 - a. The Galdegaia-rule, i.e. the operator⁸ has to be immediately followed by the verb. I will investigate which of the verbal elements follows the operator and how frequent phenomena of in-situ constructions and marked focus described for the Navarrese-Lapurcian dialect are.
 - b. The operator is sentence-initial as long as there is no topicalized constituent (which takes the position left of the operator).
2. Economy: A tendency to preserve the basic word order A O V, i.e. to undertake as few movements as possible. Basic word order is characterized by:
 - a. The subject precedes the object.
 - b. The verb is sentence-final.
 - c. The object is left-adjacent to the lexical verb (in order to maintain the unity of the verb phrase).
3. Structural priming

3. Method

The data used for this thesis was collected on a field trip in the Basque Country between January and March 2014. The original aim of the data collection was to conduct a study about ambiguity in case (absolute and ergative) in which word order played a major role, but as the variation of word orders was much bigger than assumed, it seemed to be more essential and viable to focus on this variation and to devote the whole thesis to word order. The study is data-driven and as the stimuli have not been designed for this particular study but for the originally planned ambiguity study, they might not be optimal. However, the data provides sufficient information on word order to base this study on. Not all data collected on the field trip has been used for analyses.

3.1. Stimuli

For the study, I needed transitive clauses both in neutral word order and with either subject or object in focus position, and with both subject and object realized as a noun phrase. The aim was to gather naturalistic data, and many factors needed to be controlled for. The stimuli consisted of photographs taken for the purpose of this experiment. Each photo depicted the action of a transitive or intransitive verb, including a number of verbs requiring a dative object. The agents of the actions were all animate (either one or two men or one or two women); the patients were animate or inanimate (either one or two men, one or two women, or one or two objects; the objects used were apples, bags, and books). The roles of the animate agents and patients were played by two men and two women. Some of the stimuli were designed to elicit relative clauses. I will not describe these here in more detail as the results were not used in the present study.

In order to guarantee that the participants used the target verbs, they were written in the stimuli pictures. In order to achieve a greater variety in sentences, the pictures also contained the written words *ari*, an auxiliary expressing a progressive action, *saiatu/entseatu*¹², an auxiliary meaning *to try* and the adverb *egunero* (*every day*) to elicit sentences without *ari*. Descriptions of similar stimuli, some of them also with written target words, can be found in e.g. Skopeteas et al. (2006) and Bernolet, Hartsuiker & Pickering (2009).

In three pilot studies, different versions of the experiment were tested in order to achieve the best compromise between natural output and controlled data.

¹² *ari* and *saiatu* were originally selected as these auxiliaries require both the subject and the object in absolute case in Basque, leading to ambiguities. *Entseatu* is the Navarrese-Lapurdean word for *saiatu*. In the following text, *saiatu* will be used in order to refer to both *saiatu* and *entseatu*.

3.1.1. Experimental design

Pilot 1

The first pilot study was conducted in Lund, Sweden, in a class room at Lund University. The informant was a 30-year-old man from Azkoitia, which is situated in the province of Gipuzkoa, Hegoalde.

The pilot experiment consisted of 100 stimuli pictures which were presented to the informant in a PowerPoint presentation. Some stimuli aimed to elicit relative clauses, while others were meant to elicit main clauses. A main clause with a focused noun phrase was elicited by a picture on one slide, preceded by a slide on which words were spread out in a random order. The words could for example be placed as in Figure 2. A sentence with neutral word order was elicited by a picture on one slide, preceded by a slide with a complete sentence like (24).



Figure 2: Example to elicit a question in pilot 1¹³

(24) Zer gertatzen ari da?
what.ABS happen.IMPF ARI AUX
What is happening?

The participant was instructed to read the slide with the words silently and answer the ‘question’ represented by the words on the first slide aloud using the information from the picture.

The exercise turned out to be too complex and it proved to be a mistake not to let the informant ask the questions aloud: the speaker only used the basic word order A O V in all sentences, even if the question word referred to the subject of the sentence, i.e. he did not realize the focus position at all.

Pilot 2

The second pilot study was conducted in Isturitz, Iparralde, at the home of the participant, a 38-year-old woman. In this experiment, the relative clause task was separated from the main clause task and short films were used as distractors between the different parts of the experiment. The number of stimuli in

¹³ *Laztandu* (caress.IMPF), *egunero* (every.day), *nor* (who.ABS), *gizonak* (man.ABS.PL or man.ERG)

the main clause experiment was reduced to 50. Verbs requiring a dative object and intransitive verbs were removed.

After receiving instructions for the task, the speaker was presented with example stimuli of four slides in order to familiarize herself with the task. Thereafter, she had the possibility to ask questions. In contrast to the first pilot study, the words forming the question were now written in the picture, not on a separate slide. The participant was then asked to formulate the question aloud, and to answer it. The first slide of the example task is shown in Figure 3. In the output of this pilot, the basic word order A O V was predominant, both for questions and for answers, even if the WH-word was subject of the sentence; it was used with only few exceptions. This can most probably be explained by the somewhat unnatural design of the experiment in the form of a monologue.



Figure 3: Example stimuli from pilot 2¹⁴

Pilot 3

In order to obtain more natural data, the task was changed into a dialogue task in the third pilot. The informants were a 19-year-old woman from aux Aldudes and an 18-year-old man from Hazparne (both Iparralde). The experiment was carried out in an office at IKER¹⁵. One of the participants was instructed to ask questions, the other one to answer them. As in the second pilot study, the participants were first instructed and then familiarized with the task with the help of four example stimuli.

¹⁴ *eraman* (carry.IMPF), *ari* (ARI), *mutiko* (boy), *zer* (what)

¹⁵ IKER, the 'Center of research about Basque language and texts' in Bayonne/Baiona, Lapurdi, was my host institution for my research in the Basque Country.

This time, the question was on one slide and the answer on the next. All actions were transitive verbs. In the question slide, either the agent or the patient of the action was hidden – this was the constituent the participant should ask for. In the upper left corner, two words were written in Basque, see Figure 4. One was the lexical verb the participant had to use in the question; the other was either *ari* or *saiatu* or *egunero* ‘every day’ which also had to be used in the question. In contrast to the two preceding pilot studies, the question word and the noun were not written in the slide. After the first speaker had formulated the question, the speakers clicked on the keyboard in order to move on to the next slide. Now, the picture was completely visible and the other speaker had to answer the question. The two words were still written in the upper left corner of the slide, see Figure 5. In order to achieve an event-reporting sentence, the question slide was completely black (the whole action was hidden) and the word *ari* or *egunero*, together with the lexical verb *gertatu* ‘to happen’ was shown in the upper left corner, see Figure 6. In the answer slide, the whole picture was shown and the same words as in the question were written in the upper left corner.



Figure 4: Stimuli for a question asking for the object (pilot 3)¹⁶



Figure 5: Stimuli for the answer to Figure 4¹⁷

¹⁶ *ari* (ARI), *altxatu* (lift.IMPF)

¹⁷ *ari* (ARI), *altxatu* (lift.IMPF)

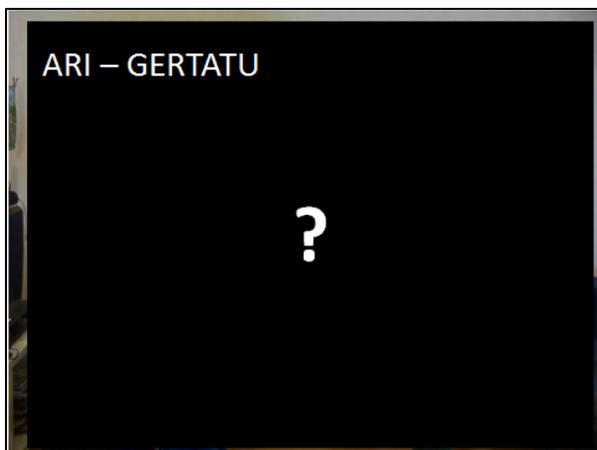


Figure 6: Stimuli for an event-reporting question¹⁸

Final experimental design

After the third pilot study, some adjustments were made to come to the final experiment. In the answer slide to the event-reporting question, not *ari/egunero* and *gertatu* but *ari/egunero* and the lexical verb of the action of the photo were written in the picture. Moreover, the experiment was split into two parts: in the first part, one speaker asked the questions and the other one answered. In the second part, the roles were reversed. The second part was not a repetition of the first part. Instead, different stimuli pictures were used.

The final experiment was carried out either in an office at IKER in Bayonne, at the home of the participants, in a youth house/*Gaztetxe* in Donostia, or in the office of an activities hall in Donostia. The final experiment design consisted of six different tasks (T1 – T6) of which only the data from T1 and T3 were used in this study. A session was built up in the following way:

1. Participants read and signed the consent. The consent was written in French (Appendix 1) resp. Spanish (Appendix 2) not to influence the speakers' dialects by written standard Basque.
2. T1: Main clause task part 1. Speaker B asked questions, speaker A answered. (60 slides; 30 question-answer pairs)
3. T2: Filler. One of the speakers narrated the content of the films for the other speaker.
4. T3: Main clause task part 2. Speaker A asked questions, speaker B answered. (58 slides; 29 question-answer pairs)
5. T4: Relative clause task. Speakers chose themselves who asked and who answered.
6. T5: Filler. The other speaker narrated the content of the films.
7. T6: Relative clause task. The speakers reversed who is asking and who is answering.
8. Speakers filled in the background questionnaire in Basque (Appendix 3, English translation in Appendix 4). The first two pairs filled in the questionnaire in French.

¹⁸ *ari* (ARI), *gertatu* (happen.IMPF)

Before the experiment, the participants were encouraged to speak naturally and to use their local dialect. The participants were also instructed to produce complete sentences. Participants of Iparralde were instructed in French (Appendix 5), participants of Hegoalde in English (Appendix 6).

Both the relative clause task and the main clause task contained training stimuli. After the training, the speakers were allowed to ask questions and I often reminded them about important rules. Everything was video- and audio recorded.

To shortly summarize the design of the main clause experiment in its final version: the stimuli were presented in a PowerPoint presentation. Both participants looked at a laptop together. The first slide they saw represented the question speaker B should ask. The photograph in the slide showed two to four persons or objects in an action, whereof one or two were the agent, and one or two the patient of the action. Either the patient or the agent of the action was hidden – this was what the participant should ask about. All actions were transitive verbs. In the upper left corner, two words were written in Basque. One was the lexical verb the participant had to use in the question; the other was either *ari* or *saiatu/entseatu* or *egunero* ‘every day’, which also had to be used in the question¹⁹. After the first speaker had formulated the question, the speakers clicked on the keyboard in order to see the next slide. Now, the picture was completely visible and the other speaker could answer the question. The two words were still written in the upper left corner of the slide. The words remained the same except in the stimuli aiming for neutral word order. Here, the slide that presented the question was almost completely black and *gertatu* ‘to happen’ was given as lexical verb. In the following answer-slide, *gertatu* was replaced by the equivalent target verb. The complete list of used verbs is shown in Table 3.

¹⁹ The auxiliaries were used as they trigger subject and object to be in different cases; *egunero* was used to prevent the use of these auxiliaries. In a sentence not containing any of the auxiliaries (i.e. a sentence containing *egunero*), the subject is in ergative case and the object in absolutive case in both dialects: *Mutikoak* (erg. sg.) *neska* (abs. sg.) *besarkatzen du* ‘The boy hugs the girl’. This leads to an ambiguity in case when the subject is in singular and the object in plural: *Mutikoak* (erg. sg./abs. pl.) *neskak* (erg.sg./abs. pl.) *besarkatzen ditu*. ‘The boy hugs the girls/ The girl hugs the boys’. In a clause containing *ari* or *saiatu*, both subject and object are in absolutive case in Batua: *Mutikoa* (abs. sg.) *neska* (abs. sg.) *besarkatzen ari da* ‘The boy is hugging the girl/The girl is hugging the boy’. In the Navarrese-Lapuradian dialect, the subject is in absolutive case and the object in genitive case: *Mutikoa* (abs. sg.) *neskaren* (gen. sg.) *besarkatzen ari da* ‘The boy is hugging the girl’. (In the data, Hazpurnian speakers actually use both the Batua and the Navarrese-Lapuradian version.)

Table 3: Lexical verbs in stimuli

English	Gipuzkoan	Navarrese-Lapuradian
hit	<i>jo</i>	
caress	<i>laztandu</i>	<i>perekatu</i>
hug	<i>besarkatu</i>	
threaten	<i>mehatxatu</i>	
push	<i>bultzatu</i>	<i>pusatu</i> (<i>bultzatu</i> for the three first pairs)
scare	<i>beldurtu</i>	
comb	<i>orraztu</i>	
pull up	<i>altxatu</i>	
shake	<i>astindu</i>	<i>inarrosi</i>
look for	<i>bilatu</i>	
eat	<i>jan</i>	
read	<i>irakurri</i>	
carry	<i>eraman</i>	
kill	<i>hil</i>	
paint	<i>margotu</i>	
happen	<i>gertatu</i> ²⁰	

3.1.2. Participants

The following requirements were applied to the participants:

- Age: 18-40 years old
- Native speaker of Basque (language transmitted by at least one parent)
- They had to have grown up in the region of Hazparne, Iparralde (known as Hasparren in French) or Donostia, Hegoalde (known as San Sebastián in Spanish)

The age limit was set in order to make sure that the speakers were used to reading in Basque. Older speakers have not been confronted with Basque text as much as Basque media has not been available in their youth to the same extent. Another advantage with young speakers is that they are all computer-literate.

As for the native language, monolingual speakers would have been ideal and speakers receiving the language from both parents would have been the second choice. However, as monolingual Basque speakers do not exist and as it would have been hard to find enough speakers with only Basque as their home language, the requirement was set as above.

The choice of the dialects was based on different reasons. Because of the special features in information structure, Navarrese-Lapuradian was one of the dialects selected for further investigation. In Hazparne

²⁰ For event-reporting questions like ‘What happens?’.

and the villages around, there are many young Basque speakers, and as many of them were willing to participate, it turned out to be a good choice.

The dialect of Donostia is very close to Batua, the standardized variety of Basque. Most modern language descriptions and also most textbooks cover Batua, which is why it was the variety that was easiest for me to learn, and on which the most literature was available.

26 speakers, i.e. 13 speaker pairs participated in the experiment. 14 speakers were from Donostia (7 male, 7 female) and 12 speakers from Hazparne (2 male, 10 female). As the number of speakers that meet the requirements is rather limited in Hazparne, it was not possible to achieve gender balance.

The average age of the Donostian speakers was 22.26 years, range 20-38. One speaker did not fill in her age in the background questionnaire. The average age of the Hazparnian speakers was 28.00 years, range 17-35. The 17-year-old speaker was allowed to participate even though she did not meet the age requirement.

12 of the Donostian speakers came from the city of Donostia; all but one who had moved to Oiartzun at 13 km distance, were still living there, and two others came from the region around Andoain, 20 km south of Donostia. It was expected that these speakers would not display any major differences in syntax compared to the speakers from the city of Donostia. This assumption proved to be inaccurate, as can be seen in the analyses section.

10 of the Hazparnian speakers came from Hazparne directly, the two others from Ayherre (5 km distance) and Lekorne/Mendionde (8 km distance). Some of the speakers were now living in the surrounding villages, the farthest at a distance of 12 km.

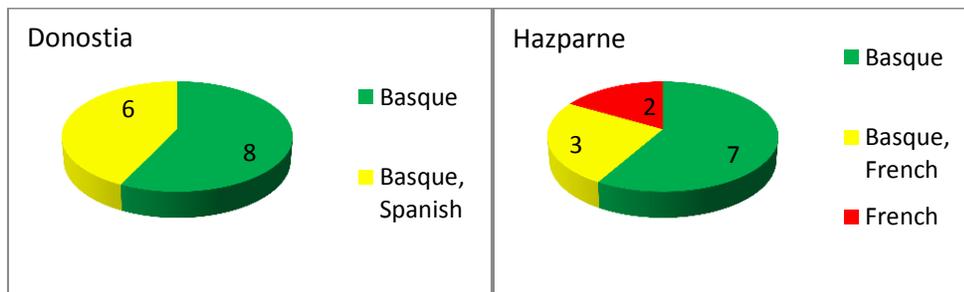


Figure 7: What language do you speak best?

When asked which language they spoke best, more than half of the speakers answered “Basque”. In Donostia, 6 of the 14 speakers described themselves as speaking Basque and Spanish equally well. Only three of the 12 Hazparnian speakers described themselves as speaking Basque and French equally well, while two speakers said that French was their strongest language. None of the Donostian participants described themselves as more proficient in Spanish than in Basque.

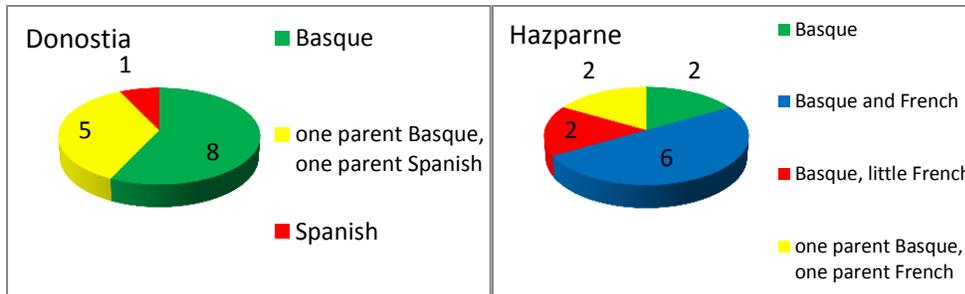


Figure 8: Which language(s) do you speak with your parents?

When asked which language(s) they spoke to their parents, a majority of the Donostian speakers (8 of 14) answered “Basque”, while only two of the Hazparnian speakers gave the same answer. Five of the Donostian and two of the Hazparnian speakers described themselves as speaking Basque with one and French/Spanish with the other parent. Six Hazparnian speakers wrote that they spoke “Basque and French” with their parents (which might be identical to speaking French with one and Basque with the other, as this information was not specifically asked for) and two speakers wrote that they spoke “Basque and a little French”. One Donostian speaker wrote that she spoke only Spanish to her parents. In principle, this was reason enough to exclude her from the study. However, she wrote that she spoke Basque with her siblings, her partner, her friends, and at work, and that she had gone both to a monolingual Basque school and to a monolingual Basque university. As her speech was very fluent, I chose to include her data in the analysis.

All Donostian speakers described themselves as speaking Gipuzkoan. One Donostian speaker specified his dialect as “Gipuzkoan/Donostia”, and another as “Gipuzkoan/Goierrikoan” (Goierri being a town 50 km south of Donostia). One speaker wrote that she spoke “Gipuzkoan/Bizkaian”, a mix of two neighboring dialects spoken in Hegoalde.

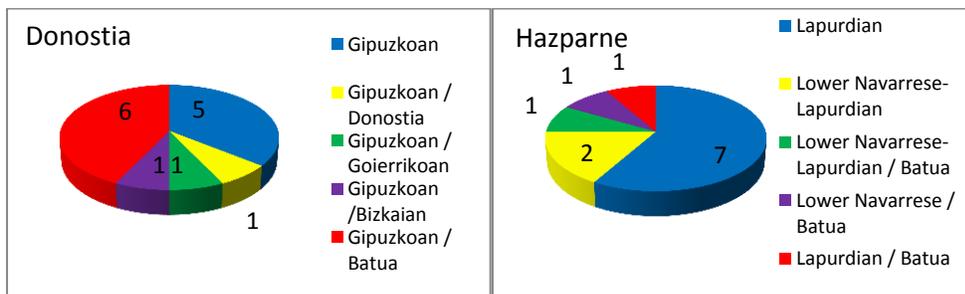


Figure 9: Which dialect do you speak?

Some Hazparnian speakers described themselves as speaking Lapurdian, some Lower Navarrese and some Lower Navarrese-Lapurdian. This nicely reflects the geographical location of Hazparne; it is situated in Lapurdi but directly borders the province of Lower Navarre (Nafarroa Beherea). Certainly, the dialect is a matter of definition.

6 of the 14 Donostian speakers described themselves as speaking a mixture of Gipuzkoan and Batua, the standardized variety of Basque, while only 3 of the 12 Hazparnian speakers described themselves as speaking a mixture of their dialect and Batua.

3.2. Data analysis

Tasks 1 and 3 (main clauses) were transcribed in ELAN²¹. The data was then exported to Microsoft Excel. It was partly coded in ELAN directly and partly in Excel. The data was analyzed with the help of pivot tables in Excel. Statistical significance was tested using the tool QuickCalcs, available on <http://www.graphpad.com>. QuickCalcs uses Fisher’s test calculating a two-sided p-value. “Prism and InStat (as well as QuickCalc since 5-April-2004) compute the two-sided P value using the method of summing small P values. Most statisticians seem to recommend this approach, but some programs use a different approach.” (<http://graphpad.com/support/faqid/985/>).

There was data from 13 pairs of participants; seven of them from Donostia, six from Hazparne. Two pairs of participants, both from Donostia, were already excluded during the transcription process as the quality of the recordings was bad for Don2 (too much background noise) and the fluency was not sufficient for Don5 (many pauses, hesitating). After the transcription, the data was coded for word order. Several participants did not realize the focus position but answered all questions in basic word order. An explanation for this behavior is that the participants did not answer the questions of their partner but instead only described the stimuli pictures. Another possible explanation is hypercorrectness as the participants in these cases spoke very carefully and slowly. This data had to be excluded as well. The excluded tasks were Don3Task1, Don3Task3, Don7Task1 and Haz6Task1. It is possible that the language of instruction played a role here as well, as the Hazparnian speakers were instructed in French, one of their native languages, while the Donostian speakers were instructed in English, which all of these speakers first acquired at a later age in school.

For the analysis of main clauses, there were three T1s and four T3s left for Donostia and five T1s and six T3s for Hazparne. The exclusion of seven tasks for Donostia led to an imbalance in the number of tasks between Donostia and Hazparne. An overview of the recorded tasks is given in Table 4.

Table 4: Recorded tasks

Don/Haz	Donostia		Hazparne	
	Task1	Task3	Task1	Task 3
1	Ok		Ok	
2	Bad audio quality		Ok	
3	Basic WO overrepresented		Ok	
4	Ok		Ok	
5	Bad fluency		Ok	
6	Ok		Basic WO overrepresented	Ok
7	Basic WO overrepresented	Ok	-	

²¹ELAN by Max Planck Institute for Psycholinguistics, The Language Archive, Nijmegen, The Netherlands, <http://tla.mpi.nl/tools/tla-tools/elan/>, cf. Wittenburg et al. 2006

Sentences that were not comprehensible or where the word order was not clear because of many self-corrections were excluded from the data set. When a speaker corrected him- or herself once and the final word order was clear, the sentence was included with the final word order. When a sentence was excluded from the analysis, its answer/question was excluded as well. This resulted in a data set consisting of 910 sentences, that is 455 question- and answer-pairs.

The following labels were used in the analysis:

1. Dialect (*Donostia* or *Hazparne*)
2. Sentence type (*question* or *declarative*)
3. Operator (*neutral* or *subject operator* or *object operator*)
4. Use of verbal elements (*V AUX*, *V ARI AUX*, *V SAI AUX* or *V SAI ARI AUX*)

The number of sentences in each category can be found in Appendix 7. There, a table with all word orders occurring in the data is provided in Table 13 as well.

The operator was defined by the question. If the question was *Zer gertatzen ari da* 'What is happening' or similar, the answer was defined as event-reporting. As many sentences were ambiguous and morphology often does not show what is subject and what object, the stimuli pictures were decisive for the definition of what was subject and what object; i.e. if speaker A asked for the subject of the picture, the subject was defined as focused in both question and answer.

As speakers did not always use the auxiliaries *ari* and *saiatu/entseatu* as indicated on the slides, it is possible that different auxiliaries are used in a question and its answer and that the distribution of verbal patterns among questions and declaratives is not necessarily even. The three different stimuli (*egunero* to elicit a sentence without *ari* or *saiatu* and *ari/saiatu* to elicit sentences with *ari/saiatu*, respectively) resulted in four different verbal patterns, as *saiatu* was often, but not always, used together with *ari*.

In order to make the sentences comparable, they were simplified as follows:

1. Modal auxiliaries

Modal auxiliaries were not analyzed separately. In cases where they appear next to the inflectional auxiliaries **edun/izan* they were left out, in cases where they replace **edun/izan*, they were coded as auxiliary. The inflectional particles *omen* (apparently) and *ote* (perhaps) were not analyzed either.

2. Nominalizations

Nominalizations of the lexical verb appeared only in the Hazparnian dialect in sentences with *saiatu* or the dialectal variant *entseatu*. No distinction was made between nominalizations and other lexical verbs in the analysis.

3. Subordinate clauses

Subordinate clauses appeared mainly in event-reporting declaratives. This can be explained by an underlying construction 'It is happening that...' which was only pronounced in very few cases. Another incidence of subordinate clauses was the construction *Ematen du* 'It seems that'. As Basque *that*-clauses do not differ from main clauses in word order, they were handled as main clauses in the analysis.

4. Two lexical verbs in one sentence

In some cases, two lexical verbs occurred in one sentence. This happened for pictures with the target verb *altxatu* 'to raise up'. Instead of only using the given verb *altxatu* some participants added *lagundu* 'to help'. When the two verbs occurred next to each other, they were analyzed as one lexical verb, in the one case where they occurred separately, they were coded as two lexical verbs.

5. Dative objects

Dative objects that occurred additionally were not analyzed. Where dative objects occurred instead of the absolutive object, they were treated as any other object.

6. Genitive objects

In the Hazparnian dialect, the auxiliaries *ari* and *saiatu* require the object to be in either absolutive or genitive case (Lafitte 1944 [2001]:351). The object was coded as O in either case.

7. Other constructions

There was one construction for each dialect which was simplified as lexical verb. In Donostia, it was the construction with *bila*, a postposition meaning 'in the search of', which replaces the lexical verb *bilatu* 'to look for'. *bila* was analyzed as lexical verb as it was used in the same way as *bilatu* was in other examples. This construction was used in three sentences in the data.

In the Hazparnian dialect the verb *beldurtu* 'to scare' was replaced with the construction *beldur arazi* 'to cause fear' by some speakers. The whole construction was analyzed as lexical verb; it occurred in eight sentences in the data.

4. Results and discussion

This chapter consists of two main parts: In section 4.1 syntactical/information structural factors will be analyzed and in section 4.2, the influence of structural priming on word order will be investigated.

4.1. Syntax and information structure

4.1.1. Occurring word orders

The number of word orders is limited by logic. Taking in account the constituents A, O, and V, there are six possible orders (AOV, AVO, OVA, OAV, VAO, and VOA). As the Basque verb can consist of several elements, there are 24-720 orders possible for the elicited sentences, when disregarding adverbials.

Table 5 shows that only a small part of the logically possible word orders really occur in the investigated material. The number of occurring orders being that much lower than the number of possible orders, means that there must be strong rules restricting word order variation in Basque.

Table 5: Possible and occurring orders

	Possible orders	Occurring orders
A O V AUX	24	9
A O V ARI AUX	120	10
A O V SAI AUX	120	10
A O V SAI ARI AUX	720	17

Table 13 in the appendix provides all word orders sorted by the categories mentioned above (dialect, sentence type, operator, and use of verbal elements).

4.1.2. Event-reporting

4.1.2.1. Event-reporting questions

The questions used for evoking neutral answers can be translated to ‘What happens every day?’ (25) or ‘What is happening?’ (26) in English. As these questions are intransitive, they are not of primary interest for this study.

(25) zer gertatzen da egunero
 DON what.ABS happen.IMPF AUX every.day
 S_{WH} V AUX ADV
 What happens every day?

(26) zer gertatzen ari da
 HAZ what.ABS happen.IMPF ARI AUX
 S_{WH} V ARI AUX
 What is happening (right now)?

85 % of the questions follow one of the orders given in the examples. In the remaining 15 % of the questions, the auxiliary or *ari* and the auxiliary directly follow the question word, while the lexical verb *gertatu* is sentence-final, as in (27) and (28).

(27)	zer	da	gertatzen	hemen	(28)	zer	ari	da	hemen	gertatzen
DON	what.ABS	AUX	happen.IMPF	here	DON	what.ABS	ARI	AUX	here	happen.IMPF
	S _{WH}	AUX	V	ADV		S _{WH}	ARI	AUX	ADV	V
	What happens here?					What is happening here?				

Adverbs can occur between ARI AUX and *gertatu* or sentence-finally. Questions deviating from the basic order (with the verbal elements in the order V AUX) are significantly more frequent in Donostia than in Hazparne, with a p-value of 0.0186 (see Figure 10).

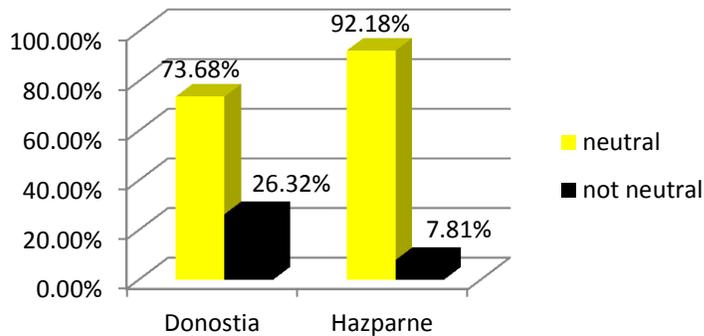


Figure 10: Word order in event-reporting questions

4.1.2.2. Event-reporting declaratives

Event-reporting declaratives are elicited by the question ‘What happens?’. In total, there are 102 neutral declaratives, 38 for Donostia, and 64 for Hazparne. The analysis of neutral sentences is especially important, as neutral word order is assumed to be the underlying order serving as reference for changes in word order. As Basque is generally described as an SOV language (De Rijk, 1969; Ortiz de Urbina, 2003:454), this was expected to be the order for event-reporting declaratives.

Figure 11 shows the simplified word order of neutral declaratives, e.g. only the position of the lexical verb is shown while the position of other verbal elements is not taken into account here. The results agree with the previous literature (De Rijk 1978:188, De Rijk 1969, Ortiz de Urbina 2003:454, Etxepare & Ortiz de Urbina 2003:460, Laka 1996:8).

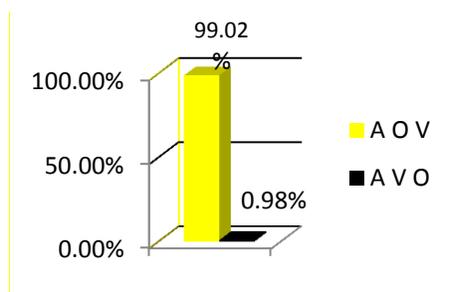


Figure 11: Simplified word order in event-reporting declaratives

In Figure 12, the other verbal elements, *ari*, *saiatu*, and the auxiliary, are considered as well.

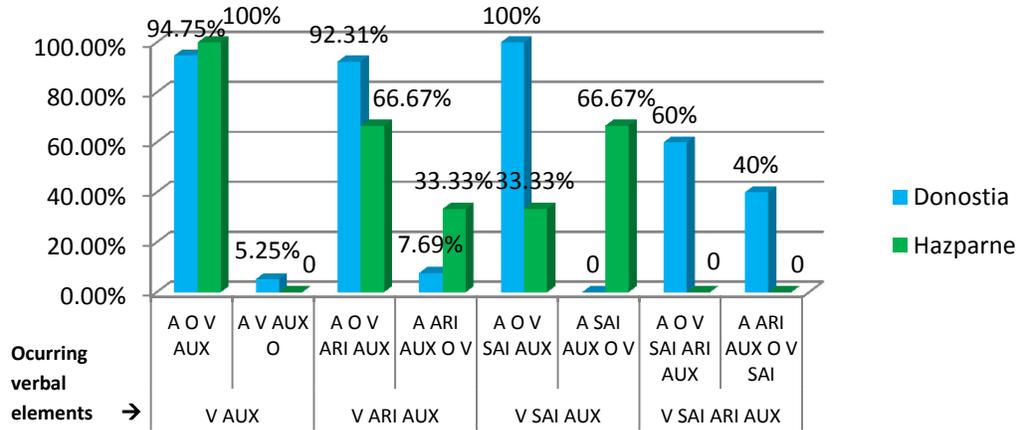


Figure 12: Word orders in event-reporting declaratives by verbal patterns

For the sentences with only lexical verb V and auxiliary AUX, the dominant word order is A O V AUX (29).

(29) emazteak egunero gizona perekatzen du
 HAZ woman.ERG.PL every.day man.ABS caress.IMPF AUX
 A ADV O V AUX
 The woman caresses the man every day.

The dominant word order for sentences containing *ari* is A O V ARI AUX, for *saiatu*-sentences it is either A O V SAI AUX or A SAI AUX O V, if there are both *ari* and *saiatu*, it is A O V SAI ARI AUX (30).

(30) neska mutikoa astintzen saiatzen ari da
 DON girl.ABS boy.ABS shake.IMPF try.IMPF ARI AUX
 A O V SAI ARI AUX
 The girl is trying to shake the boy.

Although the results are somewhat inconsistent for the *saiatu*-sentences and although there are sentences with both *ari* and *saiatu* only for Donostia, there is enough evidence that the neutral word order is, as expected, A O V. Examining the order of the verbal elements in the sentences following the AOV-order, it becomes apparent that the neutral order of the verbal elements must be V (SAI) (ARI) AUX. The complete neutral order is therefore A O V (SAI) (ARI) AUX. The results are shown in Figure 13.

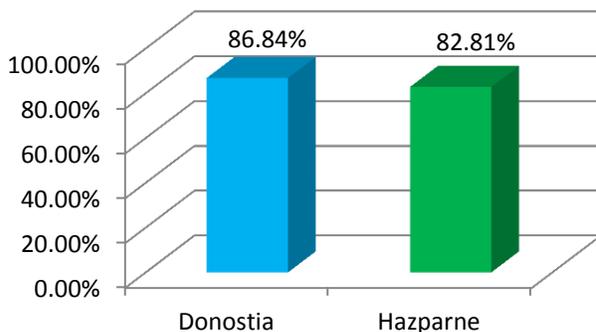


Figure 13: Word order A O V (SAI) (ARI) AUX in event-reporting declaratives

16 % of the word orders (16 sentences) deviate from this pattern, which is surprising, as all these sentences are answers to the question ‘What happens?’. It might be that structural priming is the reason for these deviating orders. This is investigated in 4.2.1.

For the *gertatu*-questions, more deviating orders were found for Donostia; for the answers to these, the pattern is reversed. Eleven of the 16 deviating sentences are produced by Hazparnian speakers, only five by Donostian speakers. The five Donostian sentences are produced by one of the speakers from Andoain. The deviations could be a dialectal feature of Hazparne and this variation of Gipuzkoan, however, it could also be an individual feature of this speaker.

Looking at the verbal elements in the deviating word orders, it is notable that the verbal elements are not always realized as a unit, but they can be separated (see (31b), which raises the question of what kind of splits are possible.

- (31) a. zer gertatzen ari da b. bi neskak ari dira haien lagunen jotzen
 HAZ what.ABS happen.IMPF ARI AUX two girl.ABS.PL ARI AUX POSS friend.GEN.PL hit.IMPF
 S_{WH} V ARI AUX A ARI AUX O V
 What is happening? The two girls are beating their friends.

The word orders occurring for event-reporting declaratives are repeated in Table 6.

Table 6: Occurring word orders for event-reporting declaratives

Verbal pattern	V AUX	V ARI AUX	V SAI AUX	V SAI ARI AUX
Basic word order	A O V AUX	A O V ARI AUX	A O V SAI AUX	A O V SAI ARI AUX
Other occurring word order	A V AUX O	A ARI AUX O V	A SAI AUX O V	A ARI AUX O V SAI

Four clear tendencies can be observed for this data:

1. The subject always precedes the object.
2. Not all verbal elements are final, but the lexical verb is part of the last constituent in all orders but in A V AUX O.
3. The object is left-adjacent to the lexical verb. The only exception is the word order A V AUX O, where the object is sentence-final.
4. The only movement that takes place in the deviating orders is a movement of certain verbal elements to the left, to the position between the two noun phrases. Both V and AUX move when they are the only verbal elements, ARI AUX move in all the sentences containing *ari* and SAI AUX in the sentences with only *saiatu*. This suggests a structure of the verbal elements in the form of [V [SAI [ARI [AUX]]]], in which the movement of the head (the auxiliary) pied-pipes²² other elements when moving, starting with the elements that are most deeply embedded. This movement is not compatible with descriptions of head-movement in traditional syntactic theories like the Government and Binding theory (cf. Travis 1984). Pied-piping in the sense of Ross (1967) implies that a moved element (e.g. a phrase) can attract the next phrase up in the structure to move together with it. But this

²² Pied-piping is explained above, see example (3)

does not happen here, which is why I chose to describe the movements as movements over a surface structure.



The latter tendency competes with the second and the third tendency when the lexical verb is affected by pied-piping. A closer investigation of these tendencies is carried out when examining the data of the sentences with a focused noun phrase (4.1.4).

4.1.3. The two noun phrases

In the basic word order, the subject precedes the object. In the information-structural basic word order, the operator (focused NP or *WH*-word) is in sentence-initial position. In the case of a topicalization the topicalized constituent moves to the left of the operator (Ortiz de Urbina 2003:461). This means that three elements, subject, operator, or topic, can be sentence-initial. The subject can be identical with either the operator or the topic.

4.1.3.1. The order of subject and object

In 626 of the 706 sentences (88.67%) with a focused NP or a question word, the subject precedes the object (cf. Figure 14), and only in 80 sentences (11.33 %) does the object precede the subject. This corroborates the hypothesis that the subject precedes the object in most cases, maintaining the basic order of the noun phrases as in (32).

(32) a. norek²³ mehatxatzen ditu egunero bi mutiko hauek
 HAZ who.ERG threaten.IMPF AUX every.day two boy this.ABS.PL
 A_{WH} V AUX ADV O
 Who threatens these two boys every day?

b. bi neskek mehatxatzen dituzte egunero bi mutikoak
 two girl.ERG.PL threaten.IMPF AUX every.day two boy.ABS.PL
 A_{FOC} V AUX ADV O
 The two girls threaten the two boys every day.

Concerning the noun phrases, a word order as in (32) is less complex as it does not require the movement of any of the noun phrases while the object has to move to the left when preceding the subject.

²³ Dialectal form of *nork* (44 occurrences in this data set).

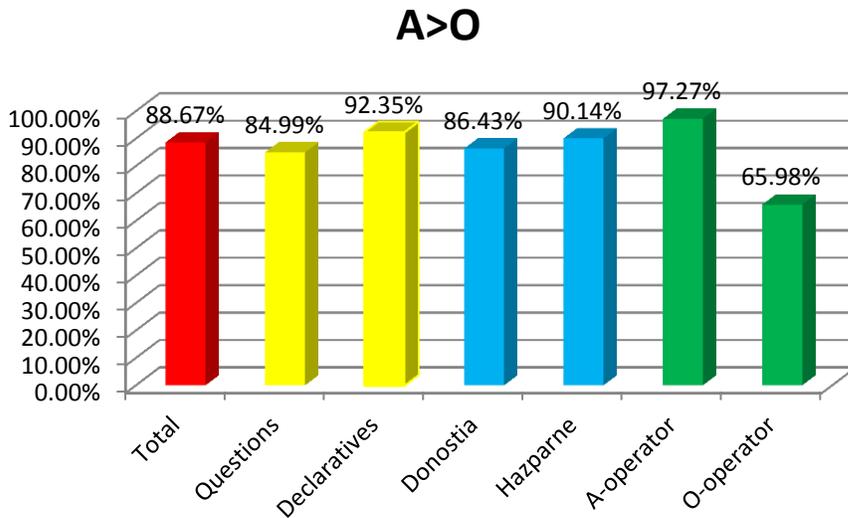


Figure 14: A>O in sentences containing a focused NP/WH-word

Figure 14 shows that the subject precedes the object more frequently in declaratives than in questions, Hazparnian speakers have a greater preference for A>O than Donostian speakers, and the tendency A>O is followed rather in sentences with a subject operator than with an object operator.

Significant differences are found for questions vs. declaratives ($p = 0.0028$) and especially between sentences with a subject operator and with an object operator ($p < 0.0001$). The difference between the dialects is not significant ($p = 0.1454$).

In sentences with a subject operator, the subject precedes the object in almost 100 % of cases, see Figure 15. This holds for both dialects and there is no significant difference between questions and declaratives either. In only 14 sentences with a subject operator (2.73 %), the object precedes the subject. The result is not surprising as we expect both the subject and the operator to strive for sentence-initial position. The high percentage of A preceding O is a logical consequence of subject and operator being identical in these sentences.

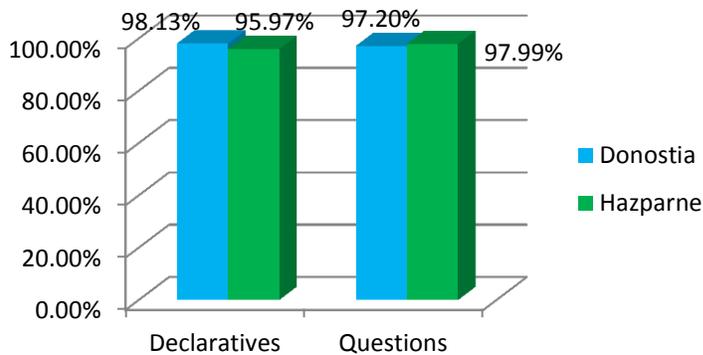


Figure 15: A>O in sentences with A-operator

The picture differs notably for sentences with an object operator. The percentage of sentences in which the subject precedes the object is much lower. The percentage is lower for questions than for declaratives and also lower for Donostia than for Hazparne. (cf. Figure 16).

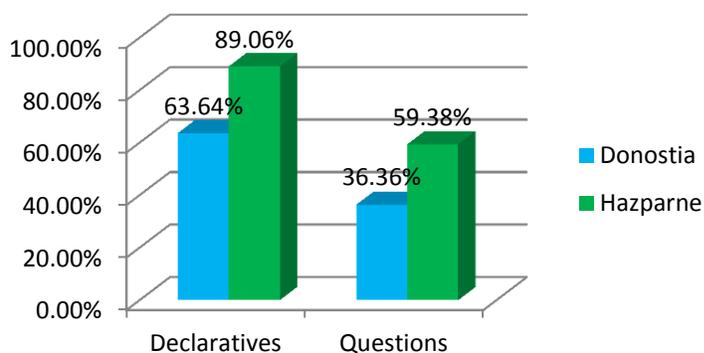


Figure 16: A>O in sentences with O-operator

Still, in more than half of the sentences, the subject precedes the object. Questions for Donostia form an exception; the subject precedes the object in only 36 %.

In contrast to sentences with an A-operator, subject and operator are not identical in sentences with an O-operator and thus compete for the first position of the sentence. The competition is reflected by the numbers approximating 50 %.

It is obvious that questions and declaratives behave differently regarding to the two basic orders: while declaratives rather follow the tendency A>O and follow A O V, the operator is sentence-initial more often in questions, i.e. they follow the order Op V Tail. The difference between statements and questions (for both dialects together) is found to be statistically significant ($p < 0.0001$), i.e. the tendency to move the interrogative operator (WH-word) to clause-initial position is much stronger than the tendency to front the focal operator (nominal NP). This is not that surprising as we know that the fronting of questions words also occurs in other languages; in English, for example, it is obligatory (in contrast to Basque).

Table 7 provides an overview of the possible orders resulting from the two underlying word orders; the more frequent orders are marked in bold and color.

Table 7: A>O in the underlying word orders

Tendency	Subject operator	Object operator
A>O	A_{FOC} O A_{WH} O	A O_{FOC} A O _{WH}
Operator-initial	A_{FOC} O A_{WH} O	O _{FOC} A O_{WH} A
	No competition between the underlying word orders: identical structures for questions and declaratives	Competition between the underlying word orders: different structures for questions and declaratives

For sentences with a subject operator, the underlying word orders do not compete which results in A>O in almost 100% of cases. For sentences with an object operator, however, the two underlying word orders compete with each other. It was found that declaratives tend to follow the A>O tendency and questions the operator-initial tendency, but that there are still many declaratives with O>A (36 % for Donostia and 11 % for Hazparne) and questions in which the operator is not sentence-initial (36 % for Donostia and even 60 % for Hazparne). This means that for Hazparne, the tendency to front the question word is weaker than for Donostia. Questions with the order A>O can be explained by a topicalization of the subject, see section 4.1.3.2, while declaratives with O>A could possibly be explained by structural priming, see section 4.2.

Obviously, Donostian speakers have a stronger preference to put the object before the subject in both questions and declaratives with an object operator. This tendency is found to be significant both for declaratives ($p = 0.0057$) and for questions ($p = 0.0351$). The tendency for keeping the order A>O seems to be stronger in the Hazparnian dialect while the focus-first tendency is stronger in Donostian.

4.1.3.2. Topic

The topic is the constituent of a sentence, the sentence is *about*. To determine the topic in the present material, it is important to remember the design of the experiment. Each declarative is embedded in a clear context as it answers the preceding question asked by the conversation partner. However, there is no context for the whole conversation. The same four persons recur again and again in the stimuli pictures. They are new information in one slide and old information in another. This means that there is no topic for the whole conversation. The speaker asking the questions decides whether or not to establish a context between her question and the preceding slides.

According to Etxepare & Ortiz de Urbina (2003:465) “any elements occurring to their [the operator+verb-pair’s] left are interpreted as topics or scrambled material”.

Topic in questions

Almost 80 % of all questions begin with the question word, followed by some verbal elements. These questions do not have a topic.

The topic is one of the three elements that can occupy sentence-initial position; the others being subject and operator. The subject can be identical with either the topic or the operator. As Figure 17 shows, only 2 % of the questions with a subject operator, the object is in topic-position, while the subject is topicalized in around half of the sentences with an object operator. This is not surprising, as the topicalization of the subject (rather than the object) comes along with the preference to maintain A>O. It conflicts, however, with the focus-first-tendency, which is why the results around 50 % for questions with focused object are not surprising here. It is difficult to say, however, what is cause and what is effect in this case: either the subject is topicalized in order to keep the basic word order A>O, or A>O is perceived as the basic word order because the topic is occupying the first position and the subject is often identical with the topic. It is possibly the case that A>O has been generalized and that the subject can now be sentence-initial even if it is neither topic nor focus.

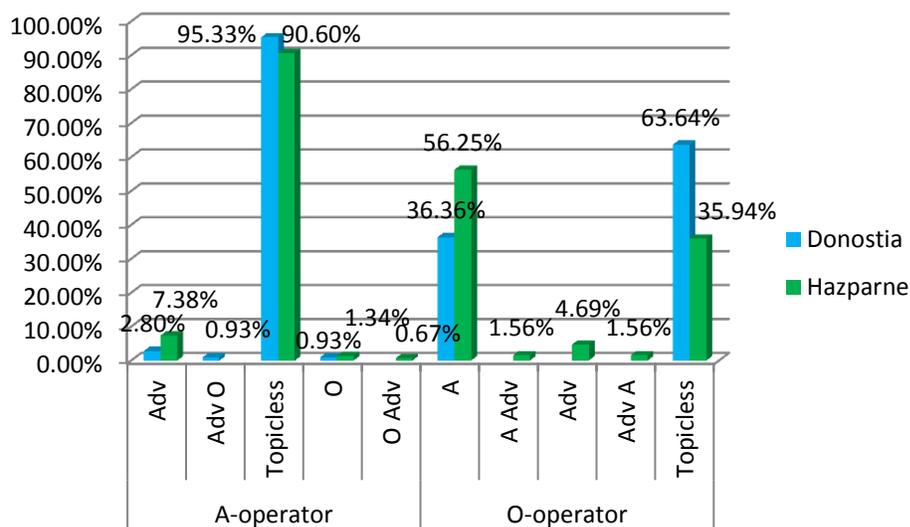


Figure 17: Topic position in questions

Topicalization also provides an explanation for why the object is fronted in some questions asking for the subject, as in (33) below. There are only five sentences with this order.

- (33) bi mutilak nork jotzen ditu egunero
 DON two boy.ABS.PL who.ERG beat.IMPFX AUX every.day
 O A_{WH} V AUX ADV
 The two boys, who beats them every day?

Topic in declaratives

Unlike the questions, the declaratives are clearly embedded in a context as they answer the preceding question. The topicalized information is old information already mentioned in the preceding question. This is one of the reasons why the number of A>O is much higher in declaratives with an O-operator than in questions with an O-operator (others being the fronting of the WH-word and a general tendency for A>O), see Figure 18. In these cases, the non-focused subject is introduced in the question (either in topic or tail) and either stays in topic position or moves to topic position in the answer.

A contrastive tendency to moving a non-focused NP to topic position can be that speakers echo the word order of the preceding question. As question words are sentence-initial in many of the questions, this would mean that the focus will be sentence-initial in the echoed word order resulting in topicless sentences. Structural priming is discussed in section 4.2. On the other hand, it also seems to be natural to begin an answer with the focused noun phrase, as this is the “missing argument in the open proposition” (as in Lambrecht 1994:211), i.e. a direct answer to the question. In a natural conversation, the speaker would usually not repeat the open proposition but only fill the gap.

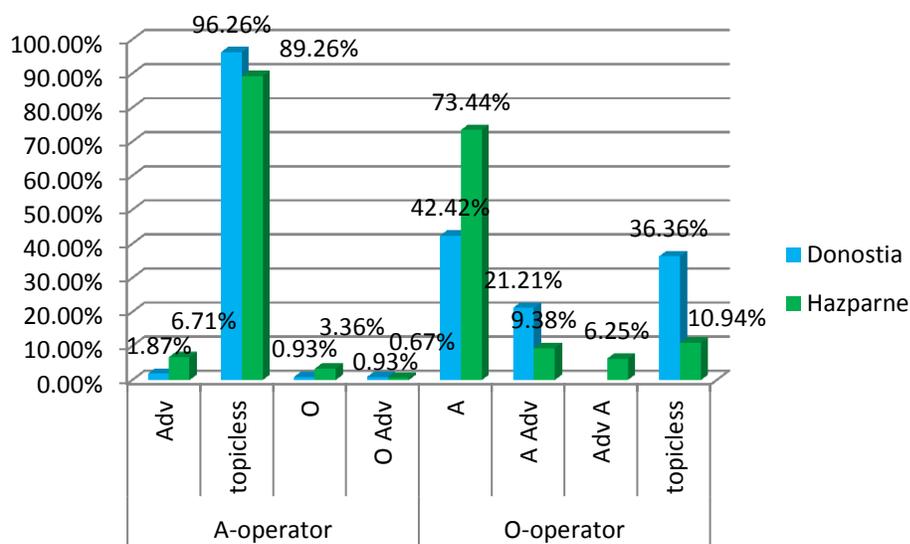


Figure 18: Topic position in declaratives

4.1.3.3. Summary noun phrases

The order of the two noun phrases subject and object is determined by three basic principles:

1. The subject precedes the object.
2. The operator is sentence-initial.
3. The topic holds the position preceding the operator.

When the subject is the operator, the subject is sentence-initial in almost all cases. In the Hazparnian dialect, the subject is also sentence-initial in a majority of the sentences with an object operator. This means that the tendency for the subject to hold the first position of a sentence is stronger in the Hazparnian dialect than it is in the Donostian dialect. The tendency for the operator to occupy sentence-initial position was found to be stronger for questions than for declaratives, i.e. interrogative operators occupy the first position more frequently than nominal operators, which means that WH-word fronting is an important factor in Basque word order.

The topic position, i.e. the position to the left of the operator, is occupied by the subject in many more cases than by the object. This leads to the assumption that it is not only context-dependent (the choice of the speaker to topicalize this constituent), but that purely syntactic preferences play a role here as well. The interaction of information structural and syntactic rules is so strong that it is hard to say what is cause and what is consequence in this case. Even though the preference for the subject to precede the object has quite possibly arisen out of the fact that the topic in many cases is identical with the subject, it seems reasonable to assume that subject preceding object has become a tendency in its own, independent from the topic-position.

This seems to be the case mainly in Hazparne and can be connected to the occurrence of in-situ order in this dialect. In the in-situ order, all constituents stay in the basic word order A O V. This means that the subject, when appearing to the left of the object operator, does not necessarily have to be topicalized – as there is only one position in which the subject can appear in in-situ word order, namely sentence-

initial. The basic word order A O V therefore has four possible interpretations in the Hazparnian dialect (while only the two first readings are possible in Donostian):

1. Neutral word order: A O V
2. Focused object, topicalized subject ('traditional' Basque WO): A_{TOP} O_{FOC} V
3. Focused object (in-situ WO): A O_{FOC} V
4. Focused subject (in-situ WO): A_{FOC} O V

As the topic is separated from the rest of the clause by a pause, it is possible to differentiate the second interpretation prosodically from the other readings. Unfortunately, it has been beyond the scope of this thesis to carry out a pause study.

4.1.4. Focus and focus pivot

One of the most important rules for Basque word order is the Galdegaia-rule which implies that a focused constituent or question word has to be left-adjacent to the verb, as in (34). According to recent research, the Galdegaia-rule can be broken in the Navarrese-Lapurcian dialect; young speakers use basic word order even if this leads to the focused constituent or question word not being in preverbal position (35). This structure is called WH/focus in-situ (Duguine & Irurtzun 2014, cf. section 2.5.1).

- | | | | | | | | | | |
|------|--------------------|-------|-----|----------|------|--------------------|---------|-------|-----|
| (34) | Nork | maite | du | mutila ? | (35) | Nork | mutila | maite | du? |
| | who.ERG | love | AUX | boy.ABS | | who.ERG | boy.ABS | love | AUX |
| | A _{WH} | V | AUX | O | | A _{WH} | O | V | AUX |
| | Who loves the boy? | | | | | Who loves the boy? | | | |

Most verbal constructions in Basque are analytical, i.e. they consist of at least two verbal elements: lexical verb and auxiliary. Moreover, some stimuli elicited the use of the auxiliaries *ari* and/or *saiatu*. This means that each sentence in the data contains two to four verbal elements. The Galdegaia-rule does not specify which of the verbal elements has to follow the operator. We could expect speakers to preserve the verbal elements in a unified chain with the order V SAI ARI AUX, which was found to be the underlying order.

In the Navarrese-Lapurcian dialect, a special kind of focalization occurs, identified as a marker of presuppositionality and exhaustivity by Duguine and Irurtzun (2010), cf. section 2.5.1. Here, the operator is immediately followed by the auxiliary alone, while the lexical verb follows the focus-auxiliary-unit (Etxepare & Ortiz de Urbina 2003:472) and can be separated from it by other constituents. As this marked construction (36) has particular semantics, it is expected to occur for Hazparne besides the standard construction (34).

- | | | | | |
|------|-------------------------------|-----|---------|-----------|
| (36) | Nork | du | mutila | maite? |
| | who.ERG | AUX | boy.ABS | love.IMPF |
| | A _{WH} | AUX | O | V |
| | Who is it that loves the boy? | | | |

When examining neutral word order in section 4.1.2.2, the operator was followed by *ari* + auxiliary or *saiatu* + auxiliary in some sentences. This indicates that there is an even greater variation of which verbal

elements can follow the operator. An internal structure (37) was suggested for the verbal elements, and it was furthermore assumed that the head of the phrase, the auxiliary, pied-pipes other verbal elements when moving. Only movements to the left take place.

(37) [V [SAI [ARI [AUX]]]]

For the marked construction, it has been described that one or more constituents can occur between the auxiliary and the lexical verb. It is assumed that this is also the case when the auxiliary pied-pipes one or several verbal elements as this could be observed for deviating orders in 4.1.2.2, cf. (38).

(38) bi neskak ari dira bi mutikoen jotzen
 HAZ two girl.ABS.PL ARI AUX two boy.GEN.PL hit.IMPF
 A ARI AUX O V
 The two girls are beating the two boys.

As the marked construction has only been described for northern dialects, we can assume that pied-piping is optional for Hazparnian speakers, i.e. the auxiliary can move to the left alone, but obligatory for Donostian speakers, i.e. the auxiliary has to drag other verbal elements with it when moving.

As the function of this/these verbal element(s) could be described impressionistically as an element around which a focused element can revolve, i.e. as a kind of "pivot", I will henceforth refer to the verbal element(s) directly following the operator as FOCUS PIVOT²⁴. The focus pivot thus always consists of the auxiliary and the verbal elements pied-piped by the auxiliary, i.e. the verbal elements between operator and auxiliary. Verbal elements that follow the auxiliary are not regarded to be part of the focus pivot. That is, the focus pivot in (38) is *ari dira*, ARI AUX, while the lexical verb *jotzen* is not part of the pivot.

In the following sections, I will investigate which verbal elements are used as a focus pivot, whether there are differences between the dialects, and how frequent each of the patterns is.

In the investigated sentences, seven different patterns could be identified. I will first discuss each of these patterns, starting with the orders that deviate the least from the basic order, before investigating their distribution in 4.1.4.9.

4.1.4.1. Basic word order

The basic word order was determined to be A O V (SAI) (ARI) AUX. It is the order used in a sentence uttered in a neutral context, answering the question 'What happens?'. It is expected that speakers try to keep the constituents in this order, i.e. in situ, if possible, in order to reduce the work load which movements require. In the underlying order, the object is left-adjacent to the verb and the subject is not. This means that the Galdegaia-rule is followed in sentences with focused object, but not in sentences with focused subject.

²⁴ In typological work on syntactic alignment the term *pivot* is used for arguments which are shared by two clauses. The intuition behind the use of the term (as an element other elements revolve around) is similar, but the actual reference is entirely different. Here I use it to refer to an element which the focus or WH-operator are left-adjacent to, i.e. which the WH-operator has "revolved around". This pre-theoretic use of the term is similar to that applied by Holmer (2006).

A special in-situ construction has been described by Duguine & Irurtzun (2014), cf. 2.5.1 as an innovation in the Hazparnian dialect, existing parallel to the Galdegaia-structure. In this construction, the focused element or WH-word does not have to be preverbal but occurs in situ, i.e. the underlying word order is maintained even if the subject is focused²⁵.

A sentence with a subject operator looks different when a speaker uses a Galdegaia-structure (39) compared to when he/she uses an in-situ construction (40).

(39)	nork	iziasten	entseetzen	ditu	bi	neskak	(40)	nor	mutikoaren	inarrosten	ari	da
HAZ	who.ERG	scare.IMPF	try.IMPF	AUX	two	girl.ABS.PL	HAZ	who.ABS	boy.GEN	shake.IMPF	ARI	AUX
	A _{WH}	V	SAI	AUX	O			A _{WH}	O	V	ARI	AUX
	Who is trying to scare the two girls?							Who is shaking the boy?				

However, when the object is focused an in-situ construction and a Galdegaia-construction can have the same surface structure. It is not possible to tell if the speaker interprets the object being in preverbal position, in the function of a focus operator, or if the sentence is in situ, i.e. the basic word order is used regardless of which element is focused.

(41) is compatible with both an in-situ analysis and with a conventional analysis in which the WH-word is in Galdegaia position. (42), however, is only compatible with the conventional analysis, as the subject is not sentence-initial, i.e. not in situ.

(41)	emazte	horiek	nor	altxatzen	entseetzen	ari	dira?
HAZ	woman	that-PL.ABS	who.ABS	lift.IMPF	try.IMPF	ARI	AUX
	A		O _{WH}	V	SAI	ARI	AUX
	Whom are the women trying to lift up?						

(42)	noren	beldurtzen	saiatzen	ari	dira	bi	mutikoak
HAZ	who.GEN	scare.IMPF	try.IMPF	ARI	AUX	two	boy.ABS.PL
	O _{WH}	V	SAI	ARI	AUX	A	
	Whom are the two boys trying to scare?						

²⁵ As the word order in an in-situ construction corresponds to basic word order this may seem problematic for the analysis. Some tasks were, as explained in paragraph 3.2, excluded from the analysis, as they contain only or a great number of sentences in basic word order. The (over-)use of basic word order can have two different reasons: either it is an in-situ construction or the speaker is not answering her/his partner's question but only describing the stimulus picture. But there are some important differences between these two: for the first, in-situ constructions cannot be expected to occur as the norm for Donostian speakers. The overuse of basic word order in these tasks can therefore only be caused by a description of pictures without answering the question asked. Only one of the Hazparnian tasks was excluded from the analysis due to overrepresentation of neutral word order. Unlike the other Hazparnian speakers, this speaker used almost only basic word order in the answers although she did not use in-situ questions in the task in which she was the one asking questions. That means that in-situ constructions are normally not part of this speaker's individual grammar and that the basic word orders in her answers therefore probably are caused by a mere description of the stimuli pictures.

In-situ questions and in-situ foci have been described for young speakers of the Navarrese-Lapurdian dialect. As all of the participants in my experiments were young speakers (the Hazparnian speakers were between 17 and 34 years old), the occurrence of this construction was expected in the Hazparnian data.

Sentences with a word order as in (40) should be less frequent in the Donostian data, but may not be completely excluded, as Etxepare and Ortiz de Urbina (2003:522) point out, not referring to any dialect in particular, that “objects may intervene between a *WH*-word or focus and the verb, producing sentences marginally better than those involving other cases of lack of adjacency”. Moreover, an overgeneralization towards basic word order as well as a mere description of the stimulus picture without taking the other speaker’s question into account could also lead to the use of the basic word order.

Object in focus

We could expect a speaker to prefer maintaining the basic word order for object-focused sentences, as the Galdegaia-rule would be respected in this order without making the effort of moving any constituents. However, the basic word order is not as frequent as expected: only 52.06 % of the sentences with an *O*-operator maintain the order *A O V* (SAI) (ARI) AUX. It is significantly more frequent for Hazparne than for Donostia (significant for questions with $p = 0.0264$ and especially for declaratives [$p = 0.0068$]). It is also significantly more frequently used in declaratives than in questions ($p > 0.0001$ for both dialects together).

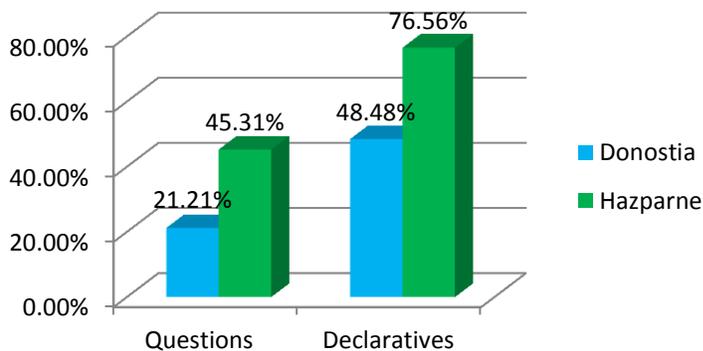


Figure 19: Use of basic word order in sentences with focused object

The more frequent usage of basic word order in Hazparne in sentences with focused object can be ascribed to the fact that both the in-situ and the Galdegaia-analysis result in the same order; remember the two possible interpretations mentioned in 4.1.3.3:

- Focused object, topicalized subject (‘traditional’ Basque WO): $A_{TOP} O_{FOC} V$
- Focused object (in-situ WO): $A O_{FOC} V$

The use of the basic word order by Hazparnian speakers is possibly reinforced by the fact that it is compatible with both their parallel existing internal grammars. Moreover, the subject is not necessarily topic in this order. It can occupy the position left of the operator without taking this function. However, for Donostian speakers this order is only possible when the subject is the topic of the sentence.

The more frequent use of the basic word order in the Hazparnian dialect could possibly even explain why it was allowed to spread to sentences with focused subject, thereby breaking the Galdegaia-rule.

The occurrence of the basic word order is more than doubled in the Donostian dialect for declaratives than for questions, and is much higher in Hazparnian declaratives than questions as well. A reason for the number being so much higher for declaratives than for questions is that the question word is fronted in many of the questions, while the object is not fronted in the declaratives as often, cf. section 4.1.3.1. This means that the more frequent use of the basic word order in declaratives compared to that in questions does not only depend on the positioning of the verbal elements and the focus, but also on the fronting of the question word which was observed above.

Subject in focus

When the basic word order is used in a sentence with focused subject, this implies that the focused constituent cannot be left-adjacent to the verb, i.e. the Galdegaia-rule is broken. Nevertheless, both questions and declaratives with this order occur in the data. Although this structure has been described as typical for the Navarrese-Lapuradian dialect, there are six declaratives with this order in the Donostian material.

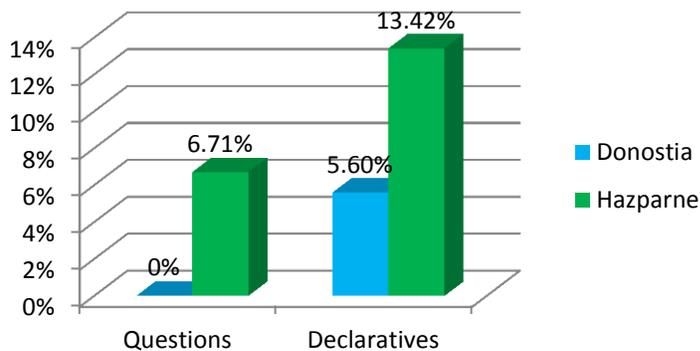


Figure 20: Use of basic word order in sentences with focused subject

There are ten in-situ questions asking for the subject for Hazparne (43) but twenty declaratives with focused subject (44).

(43)	nor	mutikoaren	inarrosten	ari	da	(44)	bi	neskek	mutilak	jotzen	dituzte
= (40)	who.ABS	boy.GEN	shake.IMP	ARI	AUX	HAZ	two	girl.ERG.PL	boy.ABS.PL	hit.IMP	AUX
HAZ	A _{WH}	O	V	ARI	AUX	A _{FOC}	O	V	AUX		
	Who is shaking the boy?						The two girls hit the boys.				

For Donostia, there are six in-situ declaratives like (45), while there are no in-situ questions. The six Donostian sentences are produced only by two speakers, one of them from Andoain. Except for one, all Hazparnian speakers use at least one in-situ declarative or question with focused subject; these are especially often used by one 18-year-old speaker (six declaratives, one question) and one 29-year-old speaker (one declarative, eight questions). The difference between the dialects for the use of in-situ in sentences with a focused subject is found to be significant ($p = 0.0014$).

(45) bi mutilek egunero bi neskak bultzatzen dituzte
 DON two boy.ERG.PL every.day two girl.ABS.PL push.IMPFX AUX
 A_{FOC} ADV O V AUX
 The two boys push the two girls every day.

As for sentences with focused object, it is found that the basic word order is used significantly more often in declaratives than in questions ($p = 0.0087$). The fronting of the question word (which is subject in this case) cannot be the reason here. While an in-situ question is ungrammatical per se due to the Galdegaia-rule, an in-situ declarative is not appropriate in its context (the sentence alone is grammatical though). Sentences as (45) are perfectly grammatical when ignoring the question it answers to, e.g. when it would be the answer to the question ‘What happens’. This is the reason why in-situ declaratives occur even for Donostia: the sentences are not ungrammatical, but they are not appropriate in their context. There are no in-situ questions for Donostia as these would be ungrammatical for the speakers of this dialect. For Hazparne, both in-situ declaratives and questions are grammatical. We have to keep in mind, however, that the emergence of this construction is a recent trend and that the in-situ construction might not be completely accepted by all speakers. It seems reasonable that the construction is first spreading to declaratives (violating discourse-rules) and then to questions (violating clause-internal syntactical rules). A bigger amount of data would be needed to support this assumption.

It is also notable that the basic word order is used in all the sentences with an A-operator in which the Galdegaia-rule is broken. That is, there are no sentences with word orders other than A O V (SAI) (ARI) AUX in which the subject operator is not in preverbal position, e.g. all sentences with focused subject that breach the Galdegaia-rule are in situ. This shows that, even if one of the ‘traditional’ syntactical rules is broken, the word order in Basque is very restricted.

4.1.4.2. Unified verbal chain as focus pivot

The unified verbal chain V (SAI) (ARI) AUX appears as focus pivot both in sentences that use the basic word order (46) and in sentences that do not as in (47).

(46) emazte horiek nor altxatzen entseatzen ari dira?
 = (41) woman that-PL.ABS who.ABS lift.IMPFX try.IMPFX ARI AUX
 HAZ A O_{WH} V SAI ARI AUX
 Whom are the women trying to lift up?

(47) noren beldurtzen saiatzen ari dira bi mutikoak
 HAZ who.GEN scare.IMPFX try.IMPFX ARI AUX two boy.ABS.PL
 O_{WH} V SAI ARI AUX A
 Whom are the two boys trying to scare?

Remember that for sentences with basic word order, both the in-situ and the Galdegaia interpretation are possible when the object is focused, while an in-situ construction with a subject focus (48) always is distinguishable from a sentence with focused subject in which the unified verbal chain is used as a focus pivot (49). In (49), the auxiliary is moved to the pivot position and pied-pipes the lexical verb *beldurtzen*. The movement taking place in such a construction is schematized in Figure 21.

(48) nor mutikoaren inarosten ari da

= (40) who.ABS boy.GEN shake.IMPf ARI AUX

HAZ A_{WH} O V ARI AUX

Who is shaking the boy?

(49) bi neskek beldurtzen dituzte bi mutilak egunero

DON two girl.ERG.PL scare.IMPf AUX two boy.ABS.PL every.day

A_{FOC} V AUX O ADV

The two girls scare the two boys every day.

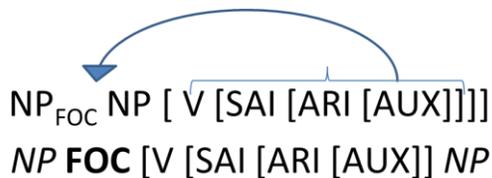


Figure 21: Unified verbal chain as focus pivot

It is expected that speakers strive to maintain the basic word order, when possible. An in-situ order would thus be the ideal choice, but when the subject is focused, this order breaches the Galdegaia-rule. The speaker has two possibilities when following the Galdegaia-rule: either she moves the whole verbal chain to pivot position and keeps the basic word order at least among the verbal elements, or she only moves some verbal elements to pivot position. This has the advantage that at least the lexical verb still is in final position. Moreover, it only requires a movement of a smaller segment of structure.

While the differences between the dialects and between questions and declaratives are not very big, the neutral order of the verbal chain is maintained in 77.84 % of the sentences with an object operator, while it is only maintained in 30.66 % of the sentences with a subject operator (Figure 22). The difference is found to be significant ($p < 0.0001$). The reason for this is probably that it is possible to maintain basic word order while following the Galdegaia-rule in sentences with an object operator, but not in sentences with a subject operator. In 60 % of the sentences with a subject operator, only some verbal elements are used as focus pivot – which these are presented in the following sections.

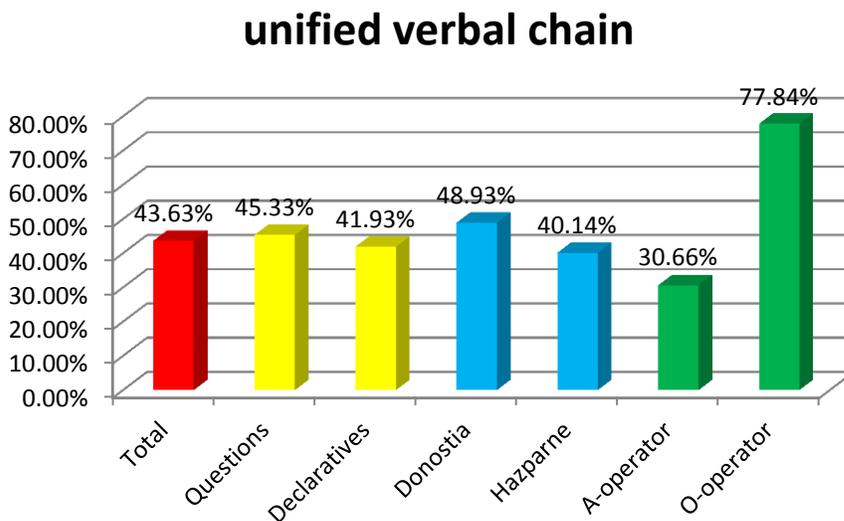


Figure 22: Percentage of sentences with the unified verbal chain as focus pivot (intransitive questions and event-reporting declaratives excluded)

Comparing the two dialects, the unified verbal chain is used in sentences with an object operator more often in Hazparne than in Donostia, while it is used more often in Donostia than in Hazparne in sentences with a subject operator (cf. Figure 23). The difference between the dialects is statistically

significant both for A-operator ($p = 0.0009$) and for O-operator ($p = 0.0033$). A possible explanation for the more frequent use of the unified chain as a focus pivot in object-focused sentences in Hazparne is that the order $A O_{\text{FOC}} V \text{ AUX}$ can be analyzed as both an in-situ order and the conventional Galdegaia-rule, i.e. that it is compatible with both strategies Hazparnian speakers use. In order to find out why the unified verbal chain is used in only one third of the sentences with a subject operator, it has to be investigated what is used as focus pivot instead.

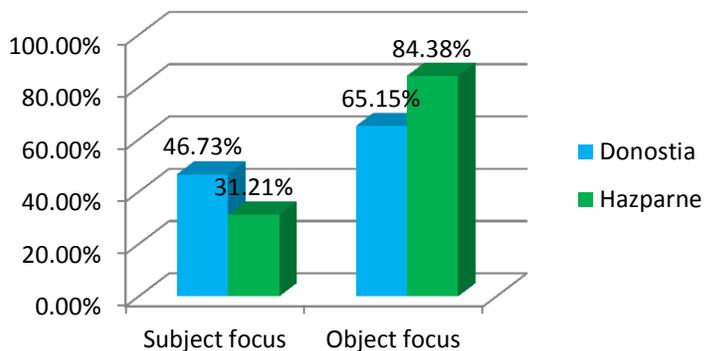


Figure 23: Unified verbal chain in Donostian and Hazparnian sentences with focused object/subject

Donostian speakers use the unified verbal chain in ca. half of the sentences with a subject operator and 65 % of the sentences with an object operator. This means that the tendency to keep the verbal elements together is not very strong here and it has to be investigated what is used as focus pivot instead.

The basic order of verbal elements is used approximately as frequently for questions (45.33 %) as it is for declaratives (49.3 %). The only major difference can be observed for sentences with an O-operator in Donostia, where the number for declaratives is higher than for questions (73 % and 58 %, respectively).

In approximately half of all sentences containing a focused NP, the verbal elements are not in neutral order. These deviating orders are described in the following sections.

4.1.4.3. *AUX as focus-pivot/marked construction*

The marked construction is a feature described for the Navarrese-Lapurdian dialect. In this construction, which differs from the standard construction in its semantics (Duguine & Irurtzun 2010, cf. section 2.5.1), the auxiliary alone moves to focus pivot position, without pied-piping any of the other verbal elements.

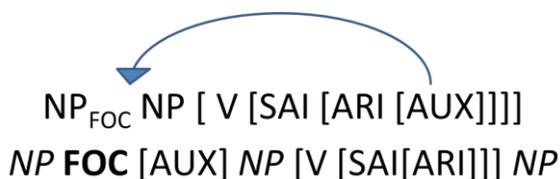


Figure 24: aux as focus pivot

“The auxiliary is then separated from the participle, and any number of constituents may intervene between the auxiliary and the participle [being in the order auxiliary participle].” (Etxepare & Ortiz de Urbina 2003:472). In (50), it is the non-focused NP, the object, intervening between auxiliary and lexical verb; in (51), it is the adverbial *egunero*. The remaining verbal elements stay in sentence-final position.

(50) bi mutikoak dira bi nesken hiltzen saiatzen ari
 HAZ two boy.ABS.PL AUX two girl.GEN.PL kill.IMPV try.IMPV ARI
 A_{FOC} AUX O V SAI ARI
 It is the two boys who are trying to kill the two girls.

(51) neska hauek nor dute egunero altxatzen
 HAZ girl this.ERG.PL who.ABS AUX every.day lift.IMPV
 A O_{WH} AUX ADV V
 These girls, who is it they lift up every day?

The AUX-pivot is used in 134 sentences, whereof 128 are produced by Hazparnian speakers and only 6 by Donostian speakers. It is much more frequently used in sentences with a subject operator than with an object operator (120:14 sentences), while the numbers for questions and declaratives are balanced with 65 declaratives and 69 questions, see Figure 25.

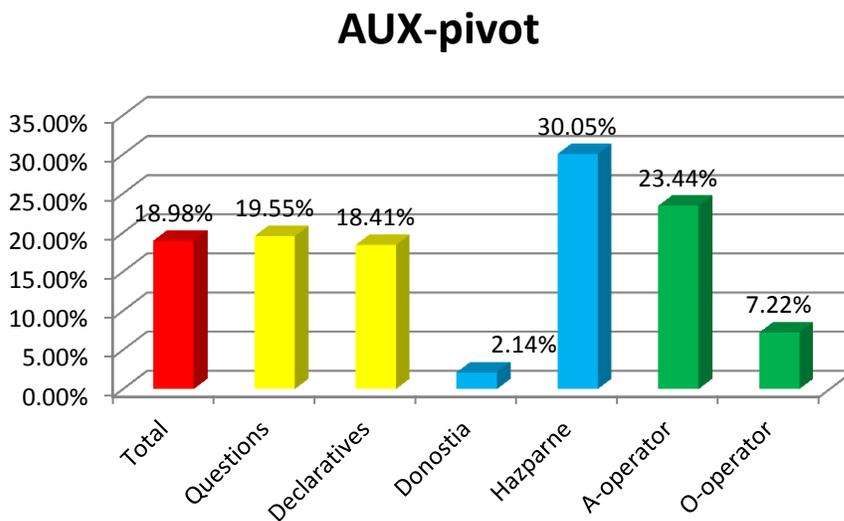


Figure 25: Percentage of AUX-pivot
 (intransitive questions and event-reporting declaratives excluded)

It is not surprising that most of the sentences with AUX-pivot are from Hazparne, as the feature has been described as typical for this dialect. It is rather surprising that there are any sentences with AUX-pivot for Donostia at all. All of these Donostian sentences are questions (52).

(52) zeinek dira bi neskak altxatzen saiatzen
 DON which.ABS.PL AUX two girl.ABS.PL lift.IMPV try.IMPV
 O_{WH} AUX A V SAI
 Whom do the two girls try to lift up?

It is notable that all these six sentences are uttered by two speakers who formed a pair in the experiment. They are the speakers coming from Andoain. The structure has – to the best of my knowledge – not been described for any dialect in Hegoalde. Without a thorough investigation of the use of this structure in the variety of the Gipuzkoan dialect spoken south of Donostia, it is not possible to tell if it serves the same semantic function as in Navarrese-Lapurcian which is described in section 2.5.1.

The auxiliary serves as a focus pivot in 120 sentences with a subject operator (23.4 % of all sentences with a subject operator), but only in 14 sentences with an object operator (7.2 % of all sentences with an object operator), see Figure 25. This difference is found to be statistically significant ($p < 0.0001$). This is consistent with the finding above that Hazparnian speakers more frequently use the unified verbal chain as a focus pivot in sentences with an object operator than in sentences with a subject operator. The reason for this preference is probably a tendency to keep the object left-adjacent to the lexical verb, in order to maintain the unity of the verb phrase. This is further discussed in section 4.1.6.

Those verbal elements that are not part of the focus pivot stay in their neutral position as in (53).

(53) nor da mutikoaren margotzen saiatzen ari
 HAZ who.ABS AUX boy.GEN paint.IMP try.IMP ARI
 A_{WH} AUXO V SAI ARI
 Who is it that is trying to paint the boy?

There are three sentences with deviating orders in all of which *saiatu* precedes the lexical verb as in (54), once together with *ari* (55). The non-focused NP intervenes either between the focus pivot and *saiatu* or between *saiatu* (*ari*) and the lexical verb.

(54) bi neskak dira zakuen entseetzen eramaten ari
 HAZ two girl.ABS.PL AUX bag.GEN.PL try.IMP carry.IMP ARI
 A_{FOC} AUX O SAI V ARI
 It is the two girls who are trying to carry the bags.

(55) nor dira entseetzen ari nesken hiltzen
 HAZ who.ABS AUX try.IMP ARI girl.GEN.PL kill.IMP
 A_{WH} AUX SAI ARI O V
 Who is it that is trying to kill the girls?

These examples show that *saiatu* can undergo movements on its own as well. These movements are investigated in section 4.1.4.9.

4.1.4.4. Cleft-constructions

Another construction that differs in the semantics of the focus is the cleft-construction. Eleven sentences (1.56 %) contain cleft-constructions. In all of these, the subject is the operator. There are four questions (56) and seven declaratives (57) that contain clefts.

(56) nor da neska horiek hiltzen entseatzen dena
 HAZ who.ABS AUX girl that.ABS.PL kill.IMP try.IMP AUX.COMP.DET
 S_{WH} COP [O V SAI] PRED
 Who is it that tries to kill those girls?

(57) emazteak dira zakuak eramaten entseatzen direnak
 HAZ woman.ABS.PL AUX bag.ABS.PL carry.IMP try.IMP AUX.COMP.DET
 S_{FOC} COP [O V SAI] PRED
 It is the women that try to carry the bags.

Donostian speakers do not use cleft-constructions and only four of the Hazparnian speakers use them, although this construction has not been described as typical for any specific dialect. Two of the speakers using this construction are a pair in the experiment and they produce seven of these sentences, suggesting that structural priming plays a major role for the production of cleft-constructions. It also indicates that the use is not very frequent in general, probably due to its very particular semantics. It is much less frequent than the AUX-pivot, which has been ascribed similar semantic content by Duguine & Irurtzun (2010). This possibly implies that a focus expressed by a cleft-construction is even more marked than the AUX-pivot. It could also simply be the case that the speakers wanted to avoid deviating from my instructions that much.

The operator is sentence-initial in all but one sentence in which the entire subordinate clause is sentence-initial and thus in topic position:

(58) bi zaku horiek eramaten saiatzen ari direnak bi neskak dira
 HAZ two bag that.ABS.PL carry.IMP try.IMP ARI AUX.COMP.DET two girl.ABS.PL AUX
 [O V SAI ARI] PRED S_{FOC} COP
 Being about to try to carry those two bags, it is the two girls who do that.

4.1.4.5. *ARI AUX as focus pivot*

In 165 of the sentences with a focused noun phrase, the operator is followed by the focus pivot consisting of *ari aux*, while the other verbal elements follow the pivot. As in the AUX-pivot, the lexical verb can be separated from the focus pivot by constituents such as the non-focused noun phrase (59) or adverbial (60).

(59) mutila ari da bi neska hauek mehatxatzen (60) zer ari da hemen gertatzen
 DON boy.ABS ARI AUX two girl this.ABS.PL threaten.IMP = (28) what.ABS ARI AUX here happen.IMP
 A_{FOC} ARI AUX O V DON S_{WH} ARI AUX ADV V
 The boy is threatening these two girls. What is happening here?

In this structure, the head of the verb phrase, the auxiliary, moves, as in the AUX-pivot, to the left, to the position immediately to the right of the operator. *ari* undergoes pied-piping while the other verbal elements stay in their original position. The non-focused noun phrase can be placed sentence-initially, sentence-finally, or to the right of the focus pivot, separating the pivot from the remaining verbal elements.

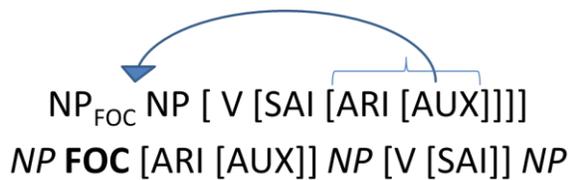


Figure 26: ari aux as focus pivot

The ARI-AUX-pivot is used in 62.26 % of all sentences containing *ari* (event-reporting sentences excluded). Of the 165 sentences in which this pattern is used, the subject is focused in 147 (75 % of all sentences with focused subject containing *ari*), while the object is focused in only 18 sentences (26 % of all O-operator sentences containing *ari*). This difference is found to be significant ($p < 0.0001$).

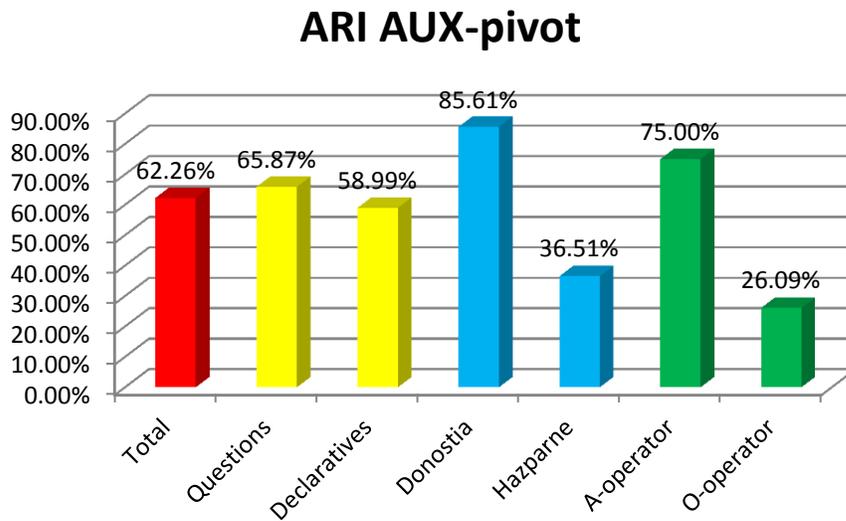


Figure 27: Percentage of the ARI-AUX-pivot in sentences containing *ari* (Event-reporting sentences excluded)

There is also an imbalance between the dialects, as 119 of the sentences are used by Donostian speakers (86 % of the sentences containing *ari*) and only 46 by Hazparnian speakers (36.5 % of the sentences containing *ari*); this is significant with $p < 0.0001$. The number of declaratives and questions is balanced with 81 declaratives and 83 questions.

In order to explain the imbalance both between dialects and between subject and object operator, it is necessary to investigate which other patterns are used in sentences with object operators and by Hazparnian speakers instead of the ARI-AUX-pivot. The marked construction (AUX-pivot) which is not part of the Donostian speakers' grammar can partly explain this imbalance: when totaling up the number of sentences using these two kinds of pivot, the difference is only 88 % to 67 % instead of 86% to 36.5 %. Regarding the imbalance between A- and O-operator, the speakers' preference to keep the object and the lexical verb together can play a role here as well as for the AUX-pivot.

In one sentence, the object is topicalized and the lexical verb is fronted, too, see (61). The reason can be that the lexical verb itself is topicalized or that the object pied-pipes the verb in order to maintain the unity of the verb phrase.

- (61) bi mutila jotzen bi neska ari dira
 DON two boy beat.IMPF two girl ARI AUX
 O V A_{FOC} ARI AUX
 Beating two boys, two girls are doing this. or: Two boys, two girls are beating them.

As for the AUX-pivot, there are also some examples in which *saiatu* precedes the lexical verb, as in (62), which means that *saiatu* alone moves to the left. This word order is found in 11 sentences.

- (62) betiko bi mutilak ari dira saiatzen betiko bi neskak hiltzen
 DON always.ADJ two boy.ABS.PL ARI AUX try.IMPF always.ADJ two girl.ABS.PL kill.IMPF
 A_{WH} ARI AUX SAI O V
 The same old two boys are trying to kill the same old two girls.

4.1.4.6. SAIATU ARI AUX as focus pivot

The focus pivot can also consist of SAIATU ARI AUX as in (63). Here, both *saiatu* and *ari* undergo pied-piping, schematized in Figure 28.

- (63) zein saiatzen ari da neskak beldurtzen
 DON which.ABS try.IMPF ARI AUX girl.ABS.PL scare.IMPF
 A_{WH} SAI ARI AUX O V
 Who is trying to scare the girls?

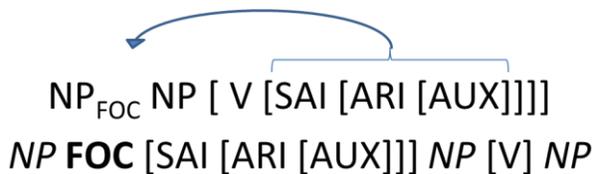


Figure 28: *saiatu ari aux as focus pivot*

There are only eight sentences with SAIATU-ARI-AUX-pivot. Their distribution is shown in Figure 29. The dialects are balanced with four sentences each. There are seven sentences with a subject operator and only one with an object operator; there are two declaratives and six questions. The rareness of this pivot suggests that there is a preference for moving fewer elements.

SAI ARI AUX-pivot

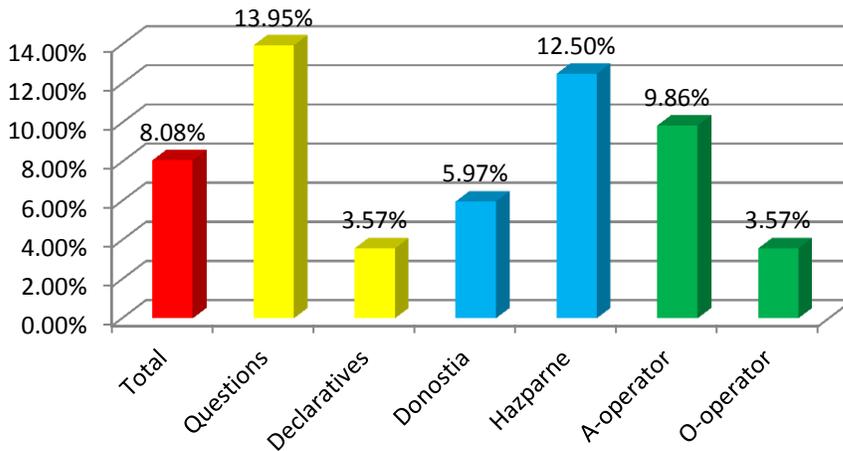


Figure 29: Percentage of the SAI-ARI-AUX-pivot in sentences containing saiatu and ari (Event-reporting sentences excluded)

4.1.4.7. SAIATU AUX as focus pivot

In sentences that do not contain *ari*, *saiatu* alone can undergo pied-piping, which means that SAIATU AUX immediately follows the focused NP or question word as in Figure 30, cf. (64).

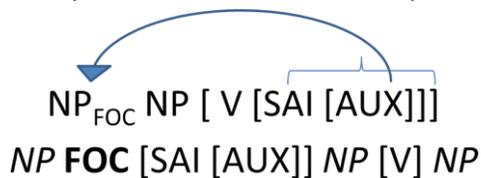


Figure 30: saiatu aux as focus pivot

(64) nor saiatzen da nesken beldurtzen
 HAZ who.ABS try.IMPF AUX girl.GEN.PL scare.IMPF
 A_{WH} SAI AUX O V
 Who tries to scare the girls?

This pattern occurs in 36 sentences, 32 of them from Hazparne. The imbalance between the dialects can be explained through the fact that Donostian speakers generally do not use *saiatu* without *ari*. Remember that only *saiatu* was given as a stimulus in the slides. Donostian speakers almost always decided to use *saiatu* together with *ari*, while Hazparnian speakers decided to use it with *ari* in less than one third of the sentences, cf. Table 8. Due to the internal structure of the verbal chain, *saiatu* can only be pied-piped without *ari* when *ari* does not occur in the sentence. In percentage, the dialects do not differ from each other, see Figure 31.

Table 8: Use of *saiatu/saiatu + ari*

Use of <i>saiatu/saiatu + ari</i>	Donostia	Hazparne	Total
<i>Saiatu</i>	9	71	80
<i>saiatu + ari</i>	72	32	104
Total	81	103	184

Figure 31 shows that there is an imbalance between sentences with a subject operator and with an object operator. There are only two sentences with an object operator in which the focus pivot consists of *SAIATU AUX* but 34 with a subject operator. The imbalance between object and subject operator is similar to the one found for *AUX-pivot* and *ARI-AUX-pivot* and can probably be ascribed to a tendency of the object to be left-adjacent to the lexical verb.

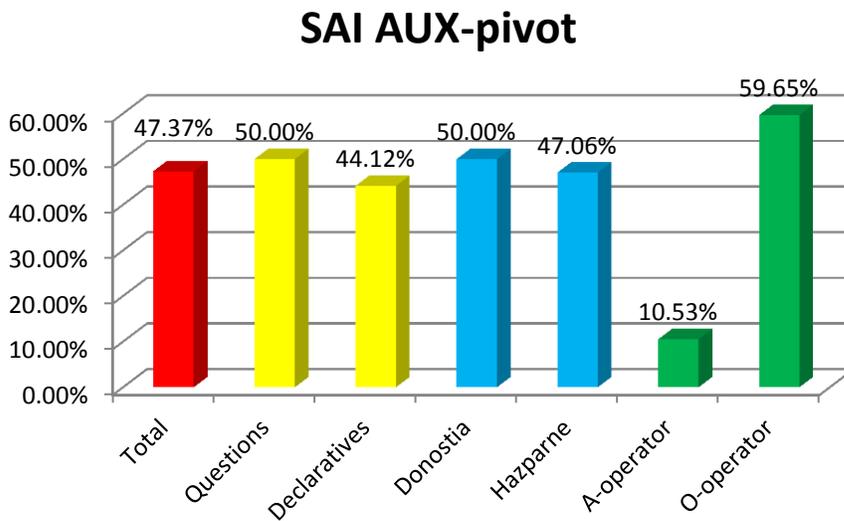


Figure 31: Distribution of the *SAIATU-AUX-pivot* in sentences containing *saiatu* (not containing *saiatu* and *ari*)

The pivots containing *saiatu/saiatu-ari* are not used very frequently. The sentences with a subject operator in Hazparne form an exception to this: this kind of focus pivot is used in over 40 % of the sentences that contain *saiatu*. The focus pivot with *saiatu/saiatu-ari* can probably be regarded as a variant of the *AUX-pivot* resp. *ARI-pivot*. Maybe *saiatu* itself is focused in these sentences so that it has to be preverbal. An argument against this is that the percentage of *saiatu*-foci is much higher than the one for *AUX-pivots* (7 % compared to less than 2 %) for Donostia.

Saiatu could also fill the function of a lexical verb in the focus, making a focus semantically comparable to a unified verbal chain.

4.1.4.8. Sentences deviating from the pied-piping pattern

Eight declaratives with an object operator deviate from the patterns described until now. In seven of these sentences, the focused object is followed by the lexical verb alone (65b); in the last one, the focused object is sentence-final (66b)²⁶.

(65) a. zer ari da neska txaketa urdin duna bilatzen
 DON what.ABS ARI AUX girl jacket blue have.COMP.DET search.IMPF
 O_{WH} ARI AUX A V
 What is the girl who has the blue jacket looking for?

b. txaketa urdina dun neska ari da bere laguna bilatzen
 jacket blue.ABS have.COMPgirl.ABSARI AUX POSS friend.ABS search.IMPF
 A ARI AUX O_{FOC} V
 The girl who has the blue jacket is looking for her friend.

(66) a. nor saiatzen ari da bi neska hauek altxatzen
 DON who.ABS try.IMPF ARI AUX two girl this.ABS.PL lift.IMPF
 O_{WH} SAI ARI AUX A V
 Whom are these two girls trying to lift up?

b. bi neska hauek ari dira saiatzen altxatzen beraien lagunak
 two girl this.ABS.PL ARI AUX try.IMPF lift.IMPF POSS friend.ABS.PL
 A ARI AUX SAI V O_{FOC}
 These two girls are trying to lift up their friends.

In both word order patterns, the subject, which is already mentioned in the question (i.e. old information), is in focus position, as it is followed by the auxiliary and other verbal elements. The order exemplified by (65) can be explained by a strong preference to keep the object in the position left-adjacent to the lexical verb and possibly also by a tendency to interpret the first noun phrase in the clause as the focus. It can also be interpreted as an ‘incorrect’ answer; the ‘wrong’ NP is in focus position, which can result from misunderstandings in the conversation.

The order of example (66) only occurs once in the data and is so a very uncommon word order (or possibly even a performance error of some kind).

4.1.4.9. Distribution of the pivot-patterns

In the preceding sections, two different strategies to construct sentences with a focused noun phrase were investigated: the in-situ strategy, almost exclusively used in Hazparne, and the Galdegaia-strategy, which is used in both dialects.

In the in-situ order, an innovation to the Navarrese-Lapuradian dialect, the word order of the entire sentence is in basic order A O V (SAI) (ARI) AUX, regardless of which noun phrase is focused.

²⁶ The preceding questions are given in order to make clear what can be expected to be focused in the answer.

In the conventional Galdegaia-strategy, the focused noun phrase is followed by some or by all verbal elements. In the Hazparnian dialect, the auxiliary can follow the focused noun phrase alone, resulting in different semantics, cf. section 2.5.1. This pattern was also found for the speakers of Andoain, but it does not occur for the speakers from the city of Donostia.

Even if the auxiliary is not permitted as the *only* verbal element in all dialects, the auxiliary is *part* of the focus pivot in all of them. Through the process of pied-piping, the auxiliary can (and for the speakers from the city of Donostia, has to) drag one or several other verbal elements with it to the position immediately following the focused noun phrase or question word. Which verbal elements undergo pied-piping is determined by how deeply they are embedded in the verb cluster. In accordance with the structure [V [SAI [ARI [AUX]]]], the pivot can consist of:

1. AUX (only for Hazparne and Andoain)
2. ARI AUX
3. SAI ARI AUX
4. V SAI ARI AUX
5. SAI AUX (in case of the absence of *ari*)
6. V AUX (in case of the absence of *ari* and *saiatu*)

The remaining verbal elements mostly stay in sentence-final position and can be separated from the pivot by a noun phrase or an adverbial. As in the focus pivot, the neutral order of the verbal elements is mostly also maintained among the other verbal elements, as in (67).

(67) nor ari da bi zakuen eramaten entseazen
 HAZ who.ABS ARI AUX two bag.GEN.PL carry.IMP try.IMP
 A_{WH} ARI AUX O V SAI
 Who is trying to carry the two bags?

In 41 sentences (4.5% of all sentences), however, those verbal elements that are not part of the focus pivot move to a position further left, between the pivot and the non-focused NP or between the pivot and the remaining verbal elements. In (68) *saiatu* moves alone and in (69) *saiatu* and *ari* move together. In (70), the lexical verb and *saiatu* move to the left together.

(68) nortzuk ari dira saiatzen neskak hiltzen (69) nor dira entseazen ari nesken hiltzen
 DON who.ABS ARI AUX try.IMP girl.ABS.PL kill.IMP HAZ who.ABS AUX try.IMP ARI girl.GEN.PL kill.IMP
 A_{WH} ARI AUX SAI O V A_{WH} AUX SAI ARI O V
 Who is trying to kill the girls? Who is trying to kill the girls?

(70) gizona ari da beldurtzen saiatzen rubia neska hau
 DON man.ABS ARI AUX scare.IMP try.IMP blond girl this.ABS
 A ARI AUX V SAI O
 The man is trying to scare the blond girl.

The question arises if these verbal elements are part of the focus pivot even though the verbal elements are not in neutral order, or if these sentences are performance errors. Another possibility is that the elements occurring next to these verbal elements are an afterthought or an extraposition. The

constructions are interesting as they require a movement in addition to the movement of the auxiliary and the pied-piping (cf. Figure 32).



Figure 32: Additional movement of *saiatu* as in (68)

The distribution of in-situ constructions

In accord with the expectations, in-situ constructions are more often found for Hazparne than for Donostia. There are only six in-situ constructions, in which the Galdegaia-rule is broken (i.e. with focused subject) for Donostia, all of them declaratives. There possibly are alternative explanations for these exceptions than an actual existence of this construction in the Donostian dialect. However, it also applies to Hazparne that in-situ constructions are more frequent in sentences with focused object, where the Galdegaia-rule is not broken, than for sentences with focused subject. This can to some extent be explained through the ambiguous reading of the construction, but it also shows that there is a greater tendency to basic word order in the Hazparnian dialect in general.

For Donostia, in-situ constructions breaching the Galdegaia-rule (i.e. with focused subject) are only found in declaratives. Also for Hazparne, in-situ constructions are found for declaratives more often than for questions (13.42 % of the declaratives are in situ but only 6.7 % of the questions). This is explained in 4.1.4.1 by the fact that an in-situ construction in a declarative only breaks rules connected to the discourse, while an in-situ construction in a question breaks clause-internal rules. The difference between questions and declaratives in Hazparne, however, is not found to be significant ($p = 0.0818$).

The distribution of Galdegaia-constructions

In contrary to in-situ constructions, no major differences can be found between questions and declaratives when it comes to the use of the Galdegaia-strategy. There are, however, significant differences in the use depending on whether the subject or the object is focused, see Figure 33.

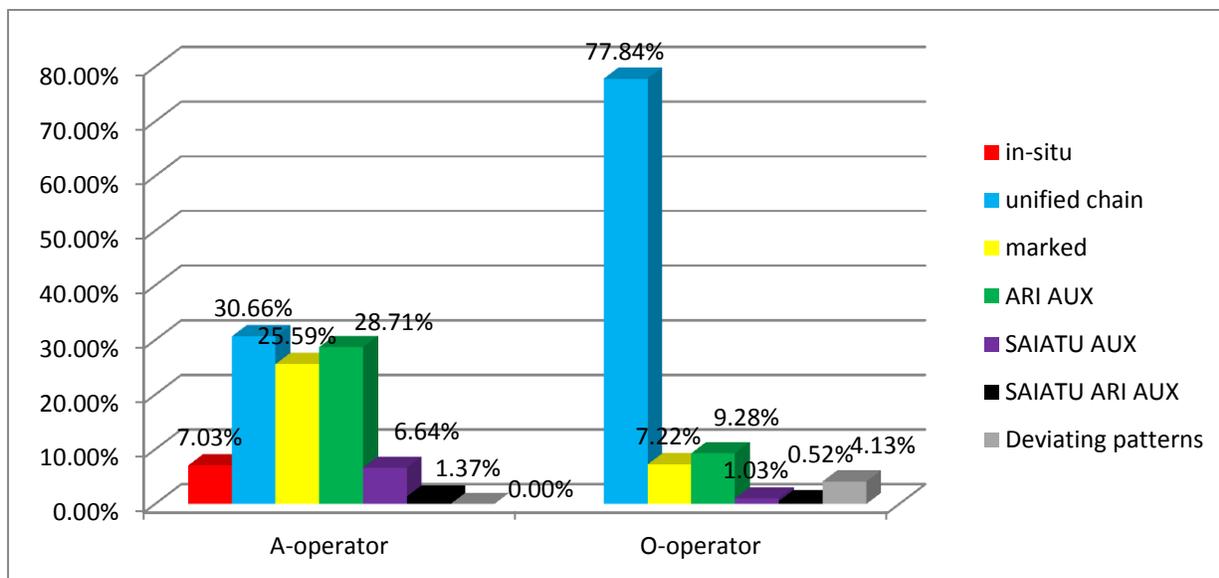


Figure 33: Distribution of pivot patterns²⁷

While 78 % of the object operators are followed by the unified verbal chain, this pattern is used in only 31 % of the sentences with a subject operator (significant at $p < 0.0001$). All other pivot patterns occur more frequently in sentences with a subject operator than with an object operator. As the lexical verb is only included in the pivot in the unified verbal chain, it is reasonable to conclude that – as it has been supposed above – an adjacency between lexical verb and object is the reason of this uneven distribution. This will be further investigated in section 4.1.6. Another explanation could be the tendency to keep the lexical verb in final position, see 4.1.5. It is surprising that even the AUX-pivot follows this pattern, as this means that not the semantics alone decides if a speaker chooses this kind of focus, but that this decision is also based on syntactic reasons.

In accordance with previous literature (Lafitte 1944 [2001]:47, Etxepare & Ortiz de Urbina 2003:472, Duguine & Irurtzun 2010:116, Laka 1996:9), it was found that the marked construction using the AUX-pivot is a special feature of the Navarrese-Lapurdián dialect. However, the same construction was also found for the two speakers from Andoain – even though it is not possible to determine from this data if the semantics of the construction is the same. The marked construction is not used by any of the speakers from the city of Donostia. This means that pied-piping is obligatory in the Donostian dialect, while it is optional in Navarrese-Lapurdián and seemingly also for the two speakers from Andoain.

We know that the marked construction, using the auxiliary as focus pivot, differs in its semantics from the standard construction at least in the Navarrese-Lapurdián dialect. However, we do not know about semantic differences between the focus pivots consisting of other verbal elements. Whether there are any semantic differences and which differences there are cannot be derived based on the investigated data set, as all the sentences were uttered in a similar context. Another study would be necessary to examine possible semantic differences.

²⁷ In-situ constructions with focused object are listed as ‘unified verbal chain’ here.

All sentences with AUX-pivot are excluded from the data in Figure 34; it only shows the ones for which a special semantics is not known. Here, the pivot patterns are distributed with regard to the verbal elements occurring in the sentence. In-situ constructions with focused subject are listed as ‘in-situ’; in-situ constructions with focused object are listed as ‘unified verbal chain’.

For sentences that only contain a lexical verb and an auxiliary, there are, disregarding the AUX-pivot, only two strategies: in-situ and the unified verbal chain as pivot. The latter is used in 96 % of cases in the Donostian dialect, and even for Hazparne, the percentage is high (85.5 %). This shows that the in-situ construction is still far from becoming the norm.

For all sentences containing *ari* and/or *saiatu*, the unified verbal chain does not take the expected prominent role; it is only used in around 7-20 % in Donostia. In Hazparne, it is much more frequent and used in 26-61 % of the sentences. This again confirms that Hazparnian speakers have a higher affinity to basic word order. The difference between the dialects for the use of the unified verbal chain in the sentences containing *ari* and/or *saiatu* is found to be significant ($p < 0.0001$)

In the sentences where other verbal elements occur besides the lexical verb and the auxiliary, the lexical verb often does not undergo pied-piping. This means that it is not necessary for the lexical verb to move, except for the cases where there is no other verbal element available: in Hazparne in order to differentiate the marked construction from the standard construction and in Donostia as pied-piping is obligatory.

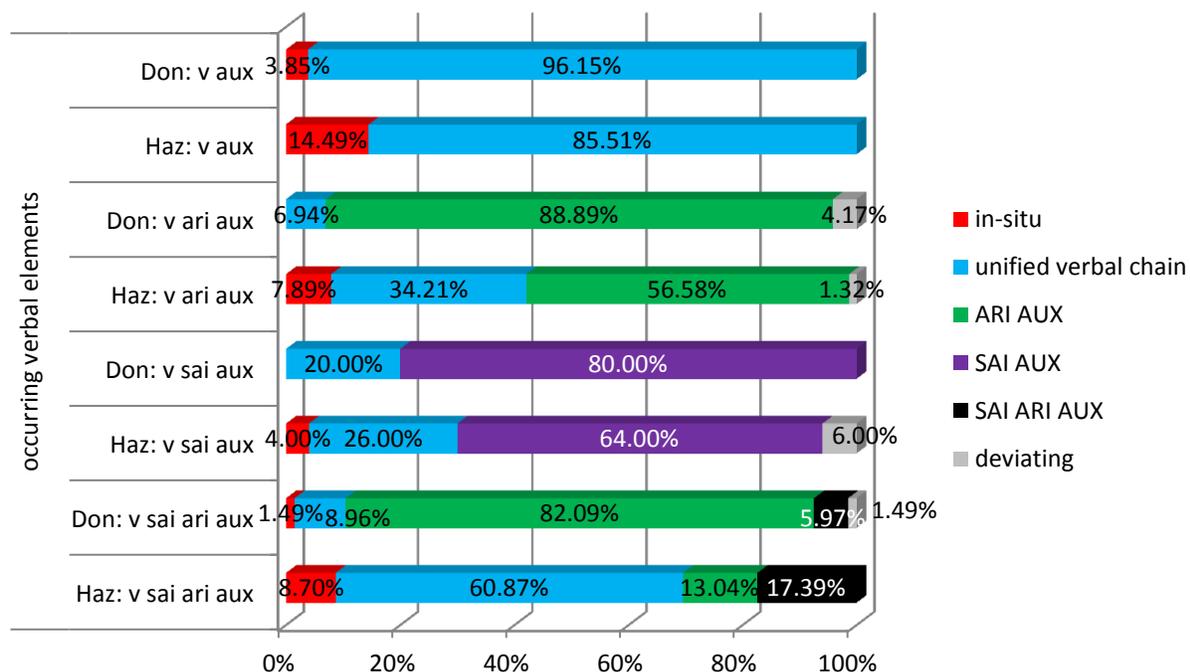


Figure 34: Distribution of pivot patterns on verbal elements (AUX-pivot excluded)

The pivot consisting of *ari* and the auxiliary is especially dominant in the Donostian dialect. For sentences containing *ari* (and not *saiatu*), it is used in 89 % of the sentences, while it is only used in 57 % of the

Hazparnian sentences. It competes with the unified verbal chain and the in-situ construction, which are both more frequent in Hazparne than in Donostia. This is even more extreme for sentences with *ari* and *saiatu*: the unified verbal chain is used as a pivot in only 9 % of the Donostian sentences but in 61 % in Hazparne, whereas the *ari*-pivot is used in 82 % of the Donostian sentences and only in 13 % of the Hazparnian sentences. This means that *ari* – where it is present – is (together with the auxiliary) the ‘normal’ focus pivot in the Donostian dialect. It is quite frequent in the Hazparnian dialect as well, but not as frequent. While the unified verbal chain is extremely rare in the Donostian dialect – as long it is not necessary – it is much more frequently used in the Hazparnian dialect. The difference between the dialects in the use of the ARI-AUX-pivot in the sentences containing *ari* (*ari* and *saiatu* included) is found to be significant ($p < 0.0001$). This implies that Donostian speakers prefer to move as few elements as possible.

4.1.5. Verb-final

One hypothesis was that speakers try to keep the verb in sentence-final position. Figure 35 shows how often this is the case in the data. Adverbials are excluded from this analysis; in fact, adverbials are sentence-final in 145 of all 910 sentences (16 %). Disregarding the adverbials, the lexical verb is part of the final constituent in almost 74 % of the sentences.

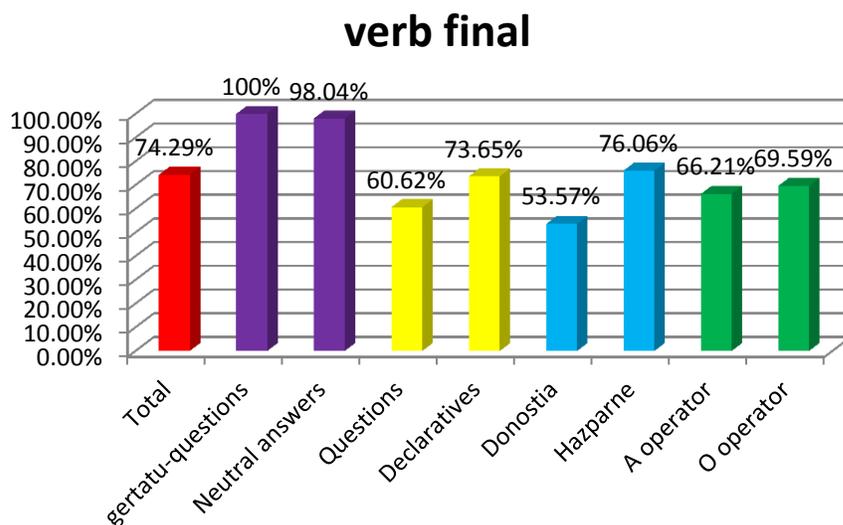


Figure 35: Verb-final sentences

I count the lexical verb alone but also combinations of verbal elements that occur in the neutral order V (SAI) (ARI) (AUX), as in (71) and the lexical verb in combination with cleft-constructions V (SAI) (ARI) PRED, as in (72). Final verbal elements that do not contain the lexical verb are not counted²⁸. The full table with final elements can be found in Appendix 8.

(71) bi mutilari dira neskak beldurtzen saiatzen
 DON two boy ARI AUX girl.ABS.PL scare.IMPF try.IMPF
 A_{FOC} ARI AUX O V SAI
 Two boys are trying to scare the girls.

(72) emaztea da gizona bilatzen ari dena
 HAZ woman.ABS AUX man.ABS look.for.IMPF ARI AUX.COMP.DET
 S_{FOC} COP O V ARI PRED
 It is the woman who is looking for the man.

The lexical verb is final in all event-reporting questions and in all but two event-reporting declaratives. There are no major differences between sentences with a subject operator and with an object operator (not significant, $p = 0.4200$). Significantly more declaratives than questions end with the lexical verb ($p < 0.0001$) and the difference is even more notable between the two dialects.

²⁸ One Donostian sentence ends in ARI AUX (full word order O V A_{FOC} ARI AUX), one Hazparnian cleft in AUX (full word order [O V SAI ARI] PRED S_{FOC} COP)

In the Hazparnian dialect 23 percentage points more sentences end in the lexical verb than in the Donostian dialect ($p < 0.0001$). This is consistent with earlier observations that Hazparnian speakers have a higher affinity to basic word order than Donostian speakers. The main reason for that is that pied-piping is optional in Hazparnian, i.e. the lexical verb can stay in sentence-final position even in sentences with only lexical verb and auxiliary, as in (73), which is not possible in Donostian. Figure 36 shows that there are only minor differences between the dialects for the other verbal patterns (sentences including *ari* and/or *saiatu*).

(73) bi neskek dute egunero liburua irakurtzen
 HAZ two girl.ERG.PLAUX every.day book.ABS read.IMPV
 A_{FOC} AUX ADV O V
 It is the two girls who read the book every day.

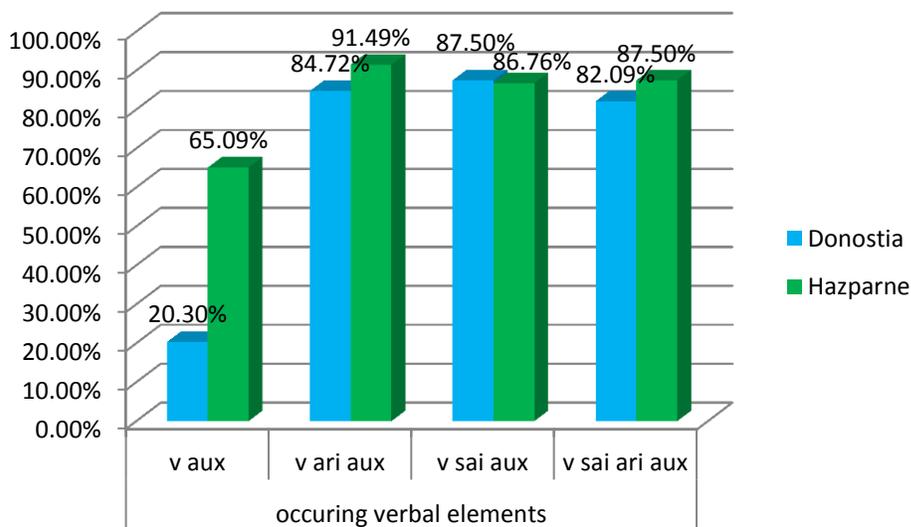


Figure 36: V-final in different verbal patterns

The difference between questions and declaratives can be reduced to sentences in which the unified verbal chain is used as focus pivot: for all other pivots, the speaker has the possibility to leave the lexical verb in final position, i.e. the number of verb-final sentences is very high for both questions and declaratives with these pivot patterns, see Figure 37. In sentences in which the unified verbal chain is used as a focus pivot, however, the lexical verb is pied-piped to the position right of the operator and can only stay in sentence-final position if the operator is the second NP of the clause. This becomes clear when looking at the same numbers sorted for subject operator (which is the first NP in most cases) and object operator (which is the second NP in most cases), cf. Figure 38.

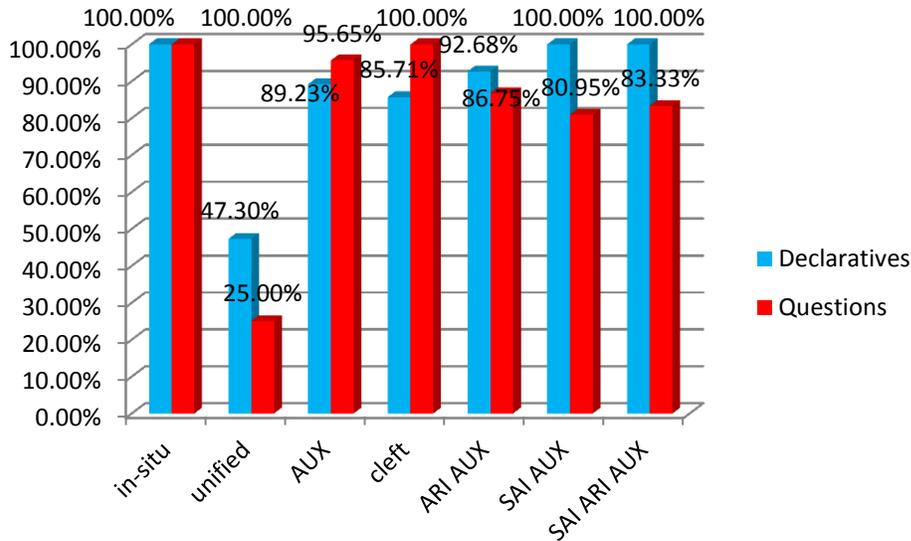


Figure 37: V-final in declaratives and questions for different pivot patterns

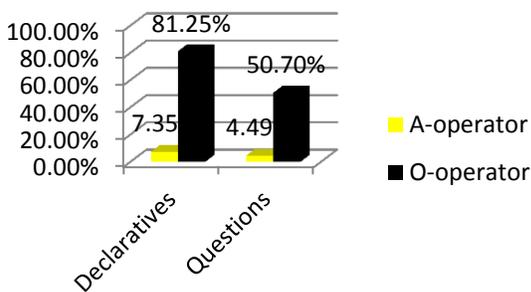


Figure 38: V-final in declaratives/questions with unified verbal chain for A/O-operator

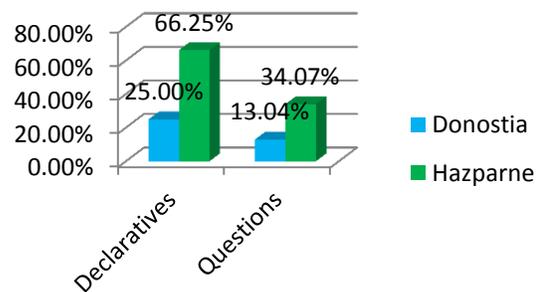


Figure 39: V-final in declaratives/questions with unified verbal chain for the dialects

The subject is the first NP in almost all sentences, i.e. when the lexical verb is pied-piped to the position right of the subject, it cannot be in final position. The object is the second NP in most declaratives, i.e. when the lexical verb is part of the pivot, it stays in final position. In questions, however, the WH-word is often fronted and the lexical verb as a part of the pivot cannot stay in final position. The difference between questions and declaratives can therefore be explained by the fronting of the WH-word. This can also provide an additional explanation for the difference between the dialects: as the WH-fronting tendency is stronger in Donostia, the lexical verb is sentence-final in fewer cases in this dialect, see Figure 39.

The preference for the final position of the lexical verb can provide an explanation for why the lexical verb often does not undergo pied-piping. The lexical verb has to be moved to pivot position in sentences in which the lexical verb and the auxiliary are the only verbal elements. The marked construction in Hazparne (AUX-pivot) forms an exception to this. For the other pivot patterns, we do not know if there is a semantic difference in including the lexical verb in the focus pivot or not. Assuming there is no semantic difference – which needs to be investigated in future studies – a reason to exclude the lexical

verb from the focus pivot could be to keep it in final position. Another reason might be that it is simpler to move fewer elements.

It is surprising that the lexical verb is neither part of the focus pivot, nor in sentence-final-position but moved to another position in ca. 9 % of the sentences (33 sentences). 31 of these sentences end in the non-focused noun phrase; the lexical verb is placed after the focus pivot and before the non-focused noun phrase, see (74)²⁹ and Figure 40. This could be an extraposition of the non-focused noun phrase, similar to what was assumed in Figure 32 for the additional movement of *saiatu*.



Figure 40: Movements as in (74).

However, the lexical verb is in sentence-final position in 91 % of the sentences in which the lexical verb is not part of the focus pivot (321 sentences), see (75).

(74)	nor	ari	da	altxatzen	laguntzen	mutila	(75)	nor	ari	da	bi	sagar	horien	jaten
DON	who.ABS	ARI	AUX	lift.IMPF	help.IMPF	boy.ABS	HAZ	who.ABS	ARI	AUX	two	apple	that.GEN.PL	eat.IMPF
	O _{WH}	ARI	AUXV		V	A		A _{WH}	ARI	AUX	O			V
	Whom is the boy helping to get up?							Who is eating those two apples?						

The tendency to keep the lexical verb in final position competes in many cases to the (assumed) tendency to keep the verbal chain unified. The separation of the verbal chain into two parts guarantees that both the Galdegaia-rule and the tendency towards a verb-final word order can be followed.

²⁹ The two remaining sentences are the two in which the lexical verb is moved to the front together with the non-focused object, cf. (61) and (58).

4.1.6. Object and verb

When discussing the placement of the verbal elements relative to the focus, the assumption that there is a tendency to maintain the unity of the verb phrase (i.e. to keep the object in its position left-adjacent to the lexical verb) has been corroborated. This in fact applies to almost all event-reporting declaratives; it is true for 100 % of the Hazparnian and 95 % of the Donostian declaratives (76).

(76) egunero bi mutilek bi neskak mehatxatzen dituzte
 HAZ every.day two boy.ERG.PL two girl.ABS.PL threaten.IMPF AUX
 ADV A O V AUX
 Every day, the two boys threaten the two girls.

The 5 % of the declaratives that are deviating in Donostian correspond to two sentences which both are not in basic word order and therefore cannot be taken as an example for event-reporting declaratives. In one of them, (77), the adverbial *cuchilloekin* ‘with knives’ is part of the verb phrase itself and therefore it does not cut off the object from the verb phrase.

(77) betiko bi mutilak ari dirala neska ileluzia cuchilloekin hiltzen saiatzen
 DON always.ADJ two boy.ABS.PL ARI AUX.COMP girl hair.light.ABS knife.COM.PL kill.IMPF try.IMPF
 A ARI AUX.SUB O ADV V SAI
 That the same old two boys are trying to kill the light-haired girl with knives.

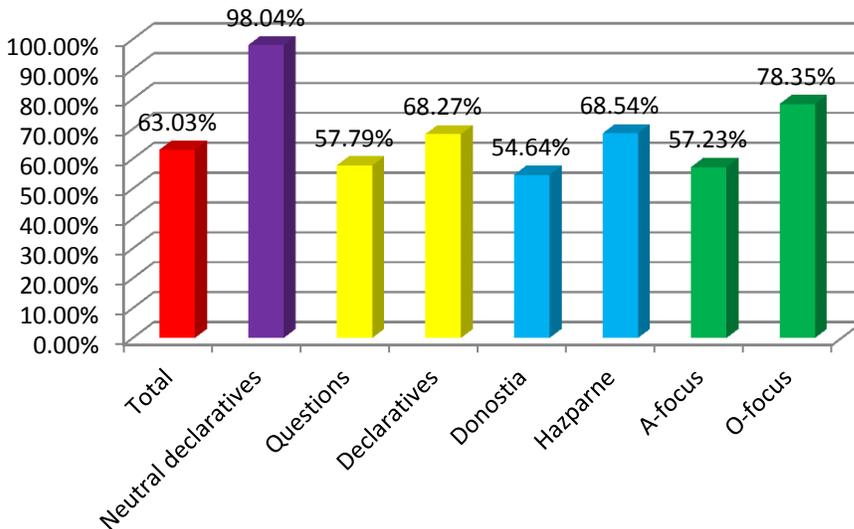


Figure 41: OV direct
 (all but neutral declaratives contain a focused NP)

In more than half of the sentences with a focused noun phrase, the lexical verb follows the object directly, cf. Figure 41. There seems to be a tendency for the object to be adjacent to the lexical verb but this tendency is not very strong. It is significantly stronger for declaratives than for questions ($p = 0.0050$), significantly stronger for Hazparne than for Donostia ($p = 0.0044$), and the biggest difference can be observed between the operators: while the focused object immediately precedes the lexical verb in almost 80 % of cases, the non-focused object precedes it in under 60 % ($p < 0.0001$).

While the difference between questions and declaratives can be explained by the fact that it is more common to move a question word than a noun phrase out of its position in basic order, the results for the differences between the dialects and the operators become clearer when split up into the verbal patterns, cf. Figure 42 and Figure 43 further down.

A-Operator

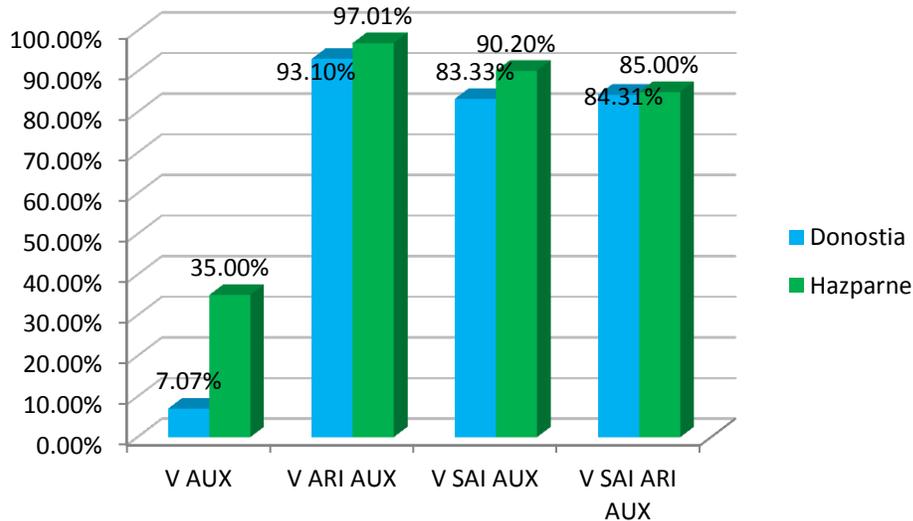


Figure 42: OV direct for sentences with A-operator

For sentences with an A-operator, the percentage for OV following each other directly is over 80 % for both dialects and for all verbal patterns except for the one containing only a lexical verb and an auxiliary. Here, the dialects differ significantly from each other: while in 35 % of the Hazparnian sentences the lexical verb directly follows the object, it is only 7 % for Donostia ($p < 0.0001$). It is important to keep in mind that pied-piping is obligatory in Donostian but not in Hazparnian. Therefore, the lexical verb has to move to pivot position when there is no other verbal element in the sentence; it follows the focused subject and cannot follow the object as in (78). The obligatory pied-piping overrules the tendency of the speakers to keep the verb phrase together. The exceptions – the sentences in which object and verb are directly following each other – are five in-situ declaratives and two questions with AUX-pivot.

(78) bi neska gazteek jotzen ditu mutikoa
 DON two girl young.ERG.PL beat.IMPFX AUX boy.ABS
 A_{FOC} V AUX O
 The two young girls beat the boy.

The explanation to why O is not left-adjacent to V in more than 35 % for Hazparne is similar: when a speaker wants to express the standard focus, the lexical verb is moved to pivot position through pied-piping. In Hazparne, the lexical verb is needed in the focus pivot to distinguish the marked construction from the standard construction; in Donostia it is needed as the AUX-pivot is not part of the speaker's grammar (with exception of the speakers from Andoain).

In the Hazparnian dialect, the main reason to separate lexical verb and object is the use of the standard focus (i.e. the lexical verb is pied-piped to focus pivot position). But there are also eleven sentences with AUX-pivot in which the lexical verb does not follow the object: in nine of the sentences, the object is sentence-final, cf. (79); in two, it is sentence-initial, cf. (80).

(79) mutikoak ditu egunero perezatzen bi neskak
 DON boy.ERG AUX every.day caress.IMPF two girl.ABS.PL
 A_{FOC} AUX ADV V O
 It is the boy who caresses the two girls every day.

(80) zaku hori egunero neskek dute eramaten
 HAZ bag that.ABS every.day girl.ERG.PL AUX carry.IMPF
 O ADV A_{FOC} AUX V
 That bag, it is the girls who carry it every day.

That means that the reason for breaking the OV-unity is mostly, but not without exception, to mark standard focus. In the word orders exemplified above, the lexical verb is not pied-piped by the focus pivot; however, the lexical verb does not follow the object. It is difficult to explain why the lexical verb is moved to the left (a seemingly superfluous movement), if not in order to be used as a focus pivot, as in (79). Future studies are needed to investigate this problem. The word order of sentences such as (80) can be explained by the topicalization of the object.

In the sentences with *ari* and/or *saiatu*, the lexical verb does not have to be pied-piped in any of the dialects. Speakers seem to prefer using *ari/saiatu* and the auxiliary as focus pivot, and to leave the lexical verb in sentence-final position, resulting in a percentage of over 80 % for OV direct. Both the OV tendency and the V-final tendency can thus be satisfied.

However, in 20 % (22 sentences) of the sentences with *saiatu* and/or *ari* the object does not directly precede the lexical verb. In seven of them, the lexical verb is part of the focus pivot; in 14, the lexical verb – in some cases together with *saiatu* – follows the focus pivot, as in (81), and in one sentence, (82), the lexical verb is split from the object through *saiatu*.

(81) bi neskak ari dira saiatzen altxatzen bi mutil hauek
 DON two girl.ABS.PL ARI AUX try.IMPF lift.IMPF two boy this.ABS.PL
 A_{FOC} ARI AUX SAI V O
 The two girls are trying to lift up these two boys.

(82) bi neskak dira zakuen entseatzen eramaten ari
 HAZ two girl.ABS.PL AUX bag.GEN.PL try.IMPF carry.IMPF ARI
 A_{FOC} AUX O SAI V ARI
 The two girls are trying to carry the bags.

O-Operator

As mentioned above, the object directly precedes the lexical verb in more sentences with an object operator than with a subject operator. In sentences with an object operator, the lexical verb must be part of the focus pivot in order to maintain the unity of the VP, i.e. the situation is reversed compared to sentences with an A-operator. Differences between the two dialects become apparent, as do differences between the verbal patterns in sentences with an A-operator. For both dialects, the results differ significantly from the ones for sentences with an A-operator.

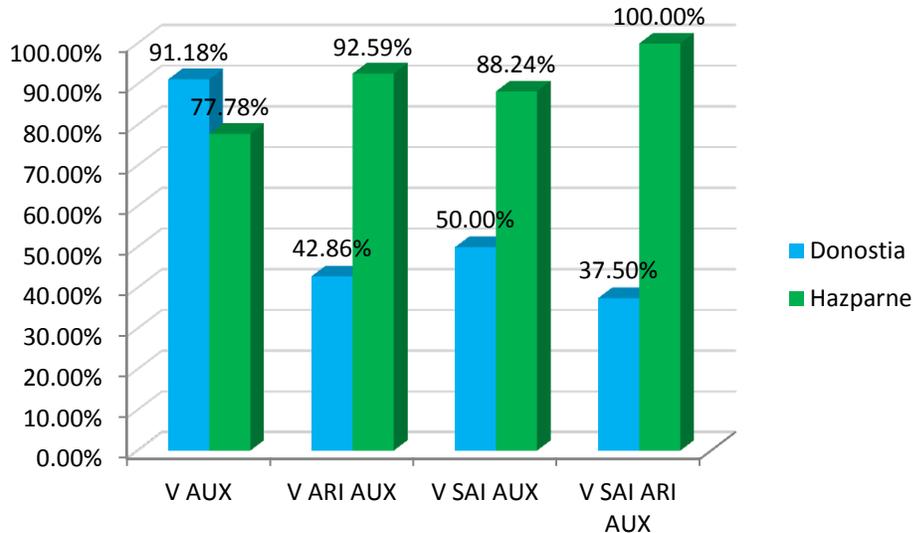


Figure 43: OV direct for sentences with O-operator

In the Hazparnian dialect, the results for A-operator and O-operator might look similar at first glance (cf. Figure 42 with Figure 43), the difference is nonetheless significant ($p = 0.0014$). In sentences with an object operator, the number of sentences in which OV form a unity is significantly higher. This is even true for 100 % of the declaratives containing *ari* and/or *saiatu*. For declaratives and questions together, the percentage is at least 88 %. The percentage for the sentences without *ari/saiatu* is somewhat lower at 78 %, but still much higher than for sentences with an A-operator where it was only 35 %. This implies that the amount of sentences with AUX-pivot is much lower for sentences with an object operator than for sentences with a subject operator. This implies that not the semantics of the focus alone decides when choosing between the marked and the standard construction (as already mentioned in 4.1.4.3).

For Donostia, the difference between A-operator and O-operator is significant as well ($p = 0.0106$). The greatest difference can be seen for sentences without *ari/saiatu* ($p < 0.0001$). The object operator is left-adjacent to the lexical verb in 91 % of cases and in sentences with a subject operator the OV-unity is maintained only in 7 % of cases. This is nevertheless not surprising as the lexical verb needs to be part of the focus pivot and as it therefore follows the subject in subject-focused sentences (83) and the object in object-focused sentences (84).

(83) bi neska gazteek jotzen dute mutikoa
 = (78) two girl young.ERG.PL beat.IMPF AUX boy.ABS
 DON A_{FOC} V AUX O
 The two young girls beat the boy.

(84) neskak bi mutilak bultzatzen ditu egunero
 DON girl.ERG two boy.ABS.PL push.IMPF AUX every.day
 A O_{FOC} V AUX ADV
 The girl, she pushes the two boys every day.

In sentences containing *ari* and/or *saiatu*, the object is directly followed by the lexical verb in a large majority of the sentences with a subject operator (at least 83 %). In the sentences with an object operator, the numbers are much lower, between 37.5 % and 50 %. In order to follow the object operator directly, the lexical verb must be part of the focus pivot. Above, it was shown that the lexical verb does not necessarily *have to* move to the pivot position but often stays in its original position; it was presumed that the reason is to mark the object as a part of the verb phrase. But here it becomes apparent that the lexical verb is often excluded from the focus pivot even in sentences with an object operator – although it could here be part of the focus pivot and at the same time mark the object as part of the verb phrase. This means that the lexical verb is not only *redundant* to mark the focus, but that a pivot without the lexical verb is *preferred* by the Donostian speakers. A pivot without the lexical verb e.g. consisting of *ARI AUX* seems to be the norm, which is however broken in some cases, possibly to mark the object as a part of the verb phrase. This could imply that the cost of pied-piping more elements is higher and therefore preferably avoided by the Donostian speakers. This cost seems to be so high that Donostian speakers prefer to give up the tendency for OV-adjacency in favor of saving the cost of the movement of an additional element in more than half of the cases.

Figure 44 shows that the lexical verb is part of the focus pivot (i.e. right-adjacent to the operator) only in exceptions for subject operator for both dialects, but that there is a huge difference between Donostia and Hazparne for sentences with an O-operator: in both dialects, the number is much higher for O-operator than for A-operator; in one third of the Donostian sentences, the lexical verb is part of the focus pivot but in 86 % of the Hazparnian sentences.

This shows that Hazparnian speakers have a stronger preference to maintain basic word order or at least parts of it such as the OV-adjacency, and that the preference to keep OV together is stronger than a tendency to keep the verbal elements in a unified chain. The existence of the *AUX*-pivot in the Hazparnian dialect can make the stranding of the lexical verb less marked as it occurs more often in this dialect.

The numbers of the Donostian data may imply that a focus pivot without lexical verb is the norm in this dialect and that economic factors like the movement of smaller segments of structure are higher prioritized than syntactic reasons like keeping OV together.

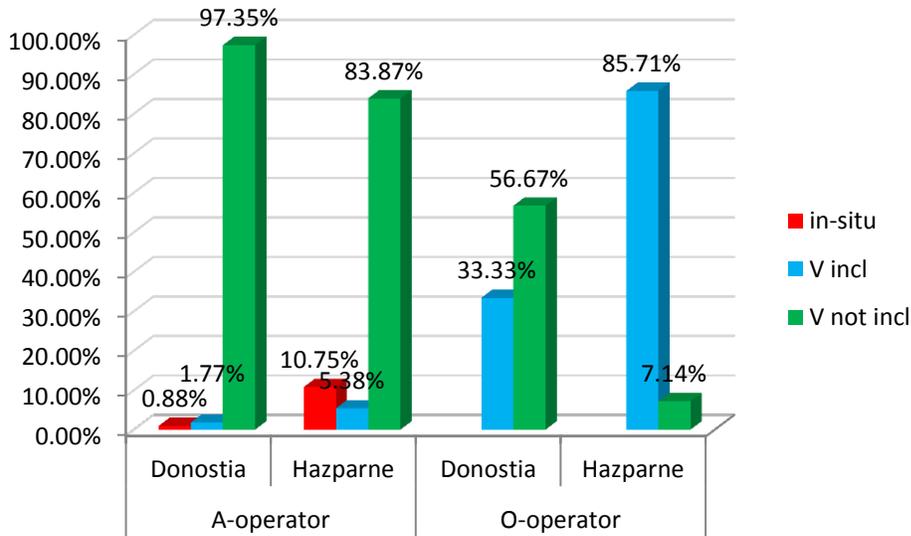


Figure 44: V in focus pivot in sentences with ari and/or saiatu
 (Sentences with AUX-pivot are excluded; in-situ sentences with O-operator are listed as V incl)³⁰

4.1.7. Placement of the adverbial

The adverbial can occupy any position in the sentence: it can be topicalized, focused, and occur between focus pivot and lexical verb or in any other place in the tail of the sentence.

Half of the event-reporting declaratives contain adverbials; they occur either in initial position (66 %), i.e. are topicalized, or in final position (15 %), i.e. at the very end of the tail. Some sentences both have one topicalized adverbial and one occurring in the tail (9 %). In four Hazparnian event-reporting declaratives, the adverbial separates the subject from the object, and in one Donostian sentence it is embedded in the verb phrase (85). This shows that the placement of the adverbial is very free.

(85) betiko bi mutilak ari dirala neska ileluzia cuchilloekin hiltzen saiatzen
 = (77) always.ADJ two boy.ABS.PL ARI AUX.COMP girl hair.light.ABS knife.COM.PL kill.IMPF try.IMPF
 DON A ARI AUX.SUB O ADV V SAI
 That the same old two boys are trying to kill the light-haired girl with knives.

In the event-reporting questions, the adverbial is final in most cases (87 %); there are only three questions in which the adverbial is sentence-initial position and two questions in which there is one adverbial in the very beginning and one in the very end. This indicates that the tendency of WH-words to be in sentence-initial position is valid even when competing with adverbs.

In three questions, the adverbial separates the pivot from the lexical verb. Two of these questions are uttered by the speakers from Andoain (86), one by a speaker from Hazparne.

³⁰ The deviating patterns discussed in 4.1.4.8 are not listed in this figure.

(86) zer ari da hemen gertatzen
 = (28) what.ABSARI AUX here happen.IMPF
 DON S_{WH} ARI AUX ADV V
 What is happening here?

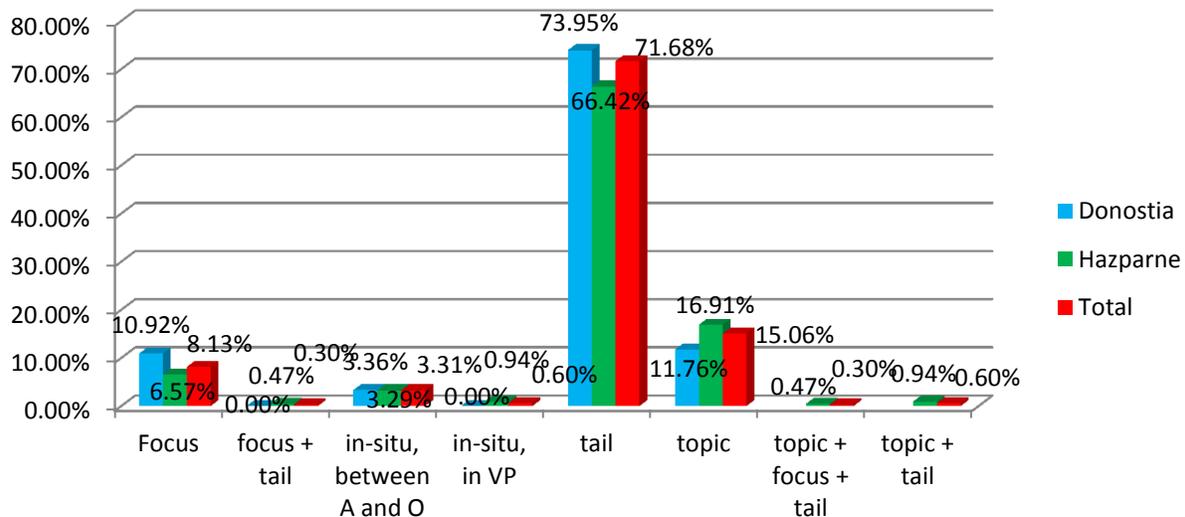


Figure 45: Position of adverbials for sentences with a focused NP

In sentences with a focused noun phrase, 70 % of the adverbials occur in the tail (the adverbial is sentence-final in 11 %); cf. Figure 45. Adverbials are also found in topic position (either sentence-initial or following the non-focused noun phrase), in focus position (between the focused NP and the focus pivot as in (87))³¹:

(87) bi neska horiek egunero beldurtzen ditu mutikoak
 HAZ two girl that.ABS.PLevery.day scare.IMPF AUX boy.ERG
 O_{FOC} ADV_{FOC} V AUX A
 Those two girls, the boy scares them every day.

and in the tail, either directly following the focus pivot and separating the marker from the lexical verb and/or the object, or occupying sentence-final position. It can also occur inside the verb phrase, separating the object from the lexical verb (88).

(88) gizonak ditu neska horiek egunero beldurtzen
 HAZ man.ERG AUX girl that.ABS.PLevery.day scare.IMPF
 A_{FOC} AUX O ADV V
 The man scares those girls every day

The only position the adverbial never occurs in is inside the focus pivot, i.e. it never separates the verbal elements in pivot position from each other (89) (modified (87)).

³¹ According to Etxepare & Ortiz de Urbina (2003:467) “it is possible to have more than one constituent focalized”.

(89) * bi neska horiek beldurtzen egunero ditu mutikoak
 two girl that.ABS.PLscare.IMPF every.day AUX boy.ERG
 O_{FOC} V ADV AUX A
 Those two girls, the boy scares every day.

It is also rare that the adverbial appears directly to the right of the focus pivot and separates the pivot from the lexical verb. There is only one sentence in Donostian, produced by a speaker from Andoain, in which this is the case (but in this sentence, the object also appears between pivot and lexical verb (90))

(90) zein saiatzen da hemen bi neska hauek hiltzen
 DON which.ABS try.IMPF AUX here two girl this.ABS.PL kill.IMPF
 A_{WH} SAI AUX ADV O V
 Who tries to kill these two girls here?

while there are 26 sentences with this pattern in the Hazparnian dialect – the adverbial is the only constituent separating pivot and V in 12 of them. This means that Donostian speakers generally prefer keeping the focus pivot and the lexical verb together, unless the object is in this position to indicate the unity of the verb phrase. The connection between the lexical verb and the other verbal elements marking the focus seems to be looser in Hazparne than in Donostia. This is certainly connected to the fact that the focus marking with only the auxiliary is allowed in Hazparnian but not in Donostian, resulting in the separation of auxiliary and lexical verb being less marked in Hazparnian.

4.2. Structural priming

Structural priming can explain why a construction that is rare in speech production in general occurs frequently in one dialogue. In this section, I focus on the constructions that were unexpected or for which no explanation could be found above. These are:

- The non-neutral word order in event-reporting declaratives
- The OA-order in declaratives
- Cleft-constructions
- Seemingly superfluous movements of verbal elements that are not part of the focus pivot

4.2.1. Non-neutral word order in event-reporting declaratives

16 (16 %) of the event-reporting declaratives are not in neutral word order but instead have verbal elements following the subject, i.e. the subject is in focus position. For seven of these, this could be based on the fact that the question word *zer* in the preceding question is not followed by the verbal chain in its basic order V SAI ARI AUX but the lexical verb follows after the other verbal elements as in (91). The separation of *ari aux* and the lexical verb in the answer could therefore be a result of structural priming.

(91) a.	zer	ari da	gertatzen	b.	bi	neskak	ari dira	bi	mutikoen	jotzen
HAZ	what.ABS	SARI	AUX	happen.IMPF	two girl.ABS.PL	ARI	AUX	two boy.GEN.PL	hit.IMPF	
	S _{WH}	ARI	AUXV		A		ARI	AUX	O	V
	What is happening?				The two girls are beating the two boys.					

The remaining nine deviating declaratives follow a question in basic word order (92).

(92) a.	zer	gertatzen	ari da	b.	bi	neskak	ari dira	haien	lagunen	jotzen
HAZ	what.ABS	happen.IMPF	ARI	AUX	= (31) two girl.ABS.PL	ARI	AUX	POSS	friend.GEN.PL	hit.IMPF
	S _{WH}	V	ARIAUX		A		ARI	AUX	O	V
	What is happening?				The two girls are beating their friends.					

However, even in these sentences the structure of the question could prime the word order of the answers. The first constituent (the question word *zer*) is followed by the verbal elements, which applies to the answer as well. Any question beginning with a question word resembles therefore structurally rather a declarative in which the first noun phrase is focused than a sentence with neutral word order. Another possibility is that these word orders are primed by sentences uttered previously in the discourse. However, a full discourse analysis goes beyond the scope of this thesis.

4.2.2. Object preceding subject in declaratives

The speakers generally preferred orders in which the subject preceded the object. In questions, however, there is also a tendency to front the WH-word which can either be object or subject. An object in first position can be explained by topicalization but could also be the result of structural priming, e.g. echoing of the word order of the question. Figure 46 shows that O>A-orders in sentences with an object operator mostly are the result of structural priming. This indicates that structural priming has such a

magnitude that even the information structure is echoed: when there is no topic in questions, there is no topic in answers either.

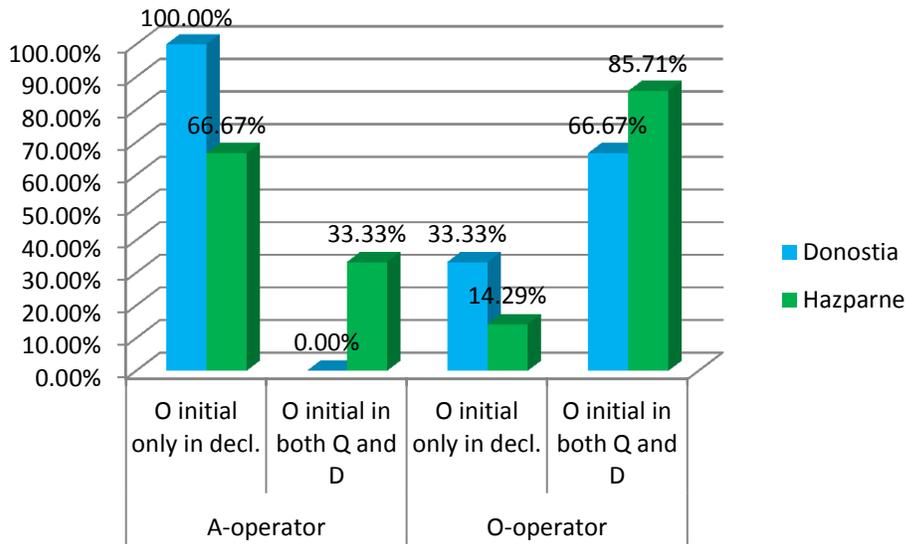


Figure 46: Structural priming of O>A order

For sentences with an A-operator, the picture looks reversed, but one has to keep in mind that there are only very few sentences with an A-operator in which the object precedes the subject, and that questions with an A-operator in which the object precedes the subject are extremely rare (3 questions for each dialect). Therefore, these numbers are not representative.

4.2.3. Cleft-constructions

Clefts are strongly marked constructions; there are only eleven sentences with clefts in the data and all are from Hazparnian speakers. The eleven sentences are shown in Table 9.

What is striking when looking at the sentences is that six of these sentences have an inanimate object (and the object is *zaku* ‘bag’ in all of them!) and only five an animate object. This is the case although there are many more sentences with animate objects (356 for Hazparne) than with inanimate object (70 sentences). The difference is found to be significant ($p = 0.0038$).

There are, however, only three speaker pairs that use this construction. In task 3 by speaker pair Haz 1, the cleft-construction is only used when the object is *zaku*. It has been shown in previous research that the effect of structural priming is “considerably enhanced by the addition of lexical repetition” (Pickering and Branigan 1998, as cited in Loebell & Bock 2003). That means that the construction is triggered by using the same lexical items.

Table 9: Sentences containing cleft-constructions

Number in task	Task	Sentence	Animacy of O
17	haz1task3	nor dira bi zaku horiek eramaten saiatzen ari direnak	Inanimate
18	haz1task3	bi zaku horiek eramaten saiatzen ari direnak bi neskak dira	Inanimate
29	haz1task3	neska bat da zakuren eramaiten saiatzen dena	Inanimate
41	haz4task1	nor dira neskak orraztatzen ari direnak	Animate
42	haz4task1	gizonak dira neskak orraztatzen dituztenak	Animate
43	haz4task1	nor da emaztea beldurtzen entseatzten ari dena	Animate
47	haz4task1	nor da neska horiek hiltzen entseatzten dena	Animate
18	haz4task3	emazteak dira zakuak eramaten entseatzten direnak	Inanimate
38	haz4task3	emaztea da zakua eramaten entseatzten dena	Inanimate
44	haz4task3	emaztea da gizona bilatzen ari dena	Animate
41	haz5task3	neska gaztea da zakuren eramaten entseatzten dena	Inanimate

A similar effect can be seen in Haz 4, Task 3. A clear effect of structural priming can also be shown for the other pairs using the cleft-construction: for Haz 4, Task 1, for example, the sentences containing a cleft-construction are produced shortly after each other (they are sentences number 41, 42, 43 and 47 of this conversation). It is still curious that so many of the sentences containing this particular lexical item use cleft-constructions, but the significance is diminished much when taking into account structural priming. The frequency of the cleft-construction in this data sample can in many cases be explained by structural priming.

4.2.4. Superfluous movements

Some movements of verbal elements seem to be rather incomprehensible from an economy perspective. One of these movements is the movement of *saiatu* (occurring 12 times, whereof *ari* is pied-piped in one case) to a position to the right of the focus pivot, and the other one is a movement of the lexical verb (occurring 26 times, whereof *saiatu* is pied-piped in eight cases). In an additional three sentences, both *saiatu* and the lexical verb move to the left alone. The schematized versions of these word orders are shown below.



Figure 47: Superfluous movement of *saiatu*



Figure 48: Superfluous movement of the lexical verb



Figure 49: Two superfluous movements (V and *saiatu*)

These additional movements seem superfluous, as it is difficult to find a reason for their occurrence. This kind of movements can be observed for nine of the ten speaker pairs. For some of them, priming effects can be observed; this is exemplified by the dialogue in (93).

- (93) a. nortzuk ari dira saiatzen neskak hiltzen b. bi mutilak ari dira neskak hiltzen saiatzen
 DON who.ABS ARI AUX try.IMPF girl.ABS.PL kill.IMPF two boy.ABS.PL ARI AUX girl.ABS.PL kill.IMPF try.IMPF
 A_{WH} ARI AUX SAI O V A_{FOC} ARIAUX O V SAI
 Who is trying to kill the girls? Two boys are trying to kill the girls.
- c. nor ari da saiatzen mutilak altxatzen d. bi neska ari dira saiatzen bi mutilak altxatzen
 who.ABS ARI AUX try.IMPF boy.ABS.PL lift.IMPF two girl ARI AUX try.IMPF two boy.ABS.PL lift.IMPF
 A_{WH} ARIAUXSAI O V A_{FOC} ARI AUX SAI O V
 Who is trying to lift the boys? Two girls are trying to lift the two boys.

In (93a), the movement of *saiatu* is introduced for the first time. In her answer, the other speaker does not echo this order. The first speaker, however, uses the same order again in her next question, and in (93d), even the other speaker echoes this order.

In the other conversations, the sentences with this order are more distant from each other. It is not certain that there is any priming effect in these cases, yet this explanation cannot be excluded based on the data.

Structural priming cannot explain why marked or ‘strange’ constructions occur in the first place, but it can relativize the frequency of occurrences.

4.3. Summary of the results

The word order patterns that were found were both more and less varied than previously expected. They were less varied in the sense that there are only few rules which cover all variation, which implies that the variation is by no means random or free. However, they were more varied in the sense that the different orders of the verbal elements were not expected, and also that the differences between the dialects were not expected to be that big.

In accordance with previous literature (De Rijk 1978:188, De Rijk 1969, Ortiz de Urbina 2003:454, Etxepare & Ortiz de Urbina 2003:460, Laka 1996:8), it was found that the neutral word order of Basque, which is used in event-reporting declaratives, is A O V. The neutral order of the verbal elements could be defined as V SAI ARI AUX, resulting in the complete basic word order A O V SAI ARI AUX.

This same word order can be used not only for event-reporting declaratives but also in other contexts. Applying the traditional Galdegaia-reading, it can be used when topicalizing the subject and focusing the object (94b). Applying the in-situ reading, this word order can be used either with a focused object (94c) or a focused subject (94d). The same distribution is also valid for WH-words, not only for a focused noun phrase.

- (94) a. A O V SAI ARI AUX (event-reporting)
b. $A_{TOP} O_{FOC/WH} V SAI ARI AUX$ (Galdegaia reading)
c. $A O_{FOC/WH} V SAI ARI AUX$ (in-situ reading 1)
d. $A_{FOC/WH} O V SAI ARI AUX$ (in-situ reading 2)

This means that A O V SAI ARI AUX is not only the *neutral* word order but also the *basic* word order of Basque, as it can be used in different pragmatic situations.

The in-situ reading is a feature used only in the dialect of Hazparne (cf. Duguine & Irurtzun 2014). The data corroborated Duguine's and Irurtzun's study. This can only be determined for sentences with A_{WH} or A_{FOC} , as both readings are possible when the object is focused (cf. (94b and c)). Duguine and Irurtzun (ibid:12) assume that this ambiguity in surface structure, together with an influence from in-situ questions in French, triggered the change. Even for sentences with focused object, the basic word order was found more frequently in Hazparnian than in Donostian, although these are perfectly grammatical in Donostia with the Galdegaia reading. This can be interpreted in two ways: either Hazparnian speakers have a higher affinity to basic word order and the in-situ construction could evolve due to this preference, or Hazparnian speakers prefer using the basic word order because it is compatible with both of the internal structures they use. These factors likely go hand in hand.

It was also found that the in-situ order is used much more frequently in declaratives than in questions. This was explained with the fact that speakers rather breach discourse rules (using the in-situ construction in declaratives) than clause-internal syntactical rules, i.e. breaking the adjacency between WH-word and verb.

Unexpectedly, this data indicates the 'way of change' from the very strict Galdegaia-rule to permitting in-situ constructions. Firstly, there is a high frequency of the basic word order for sentences with focused object which does not break the Galdegaia-rule but is accompanied by an overgeneralization of the

subject in topic-position. Secondly, discourse-rules are broken and the basic word order is even used in declaratives with a focused subject. After that, the structure spreads to questions asking for a subject, and clause-internal syntactic rules are broken. As the change from Galdegaia to in-situ is still ongoing, it would be very interesting to continue studying this phenomenon as an example of ongoing syntactic change. Even though the change can be explained without external factors, an influence from French should not be underestimated, as in-situ questions frequently occur in French speech (cf. also Duguine & Irurtzun 2014:27).

The in-situ construction is nevertheless still far from being truly grammaticalized, which is indicated by the low number of occurrences in the investigated data set. The Galdegaia-construction is still the norm for both dialects. In the previous literature, two different ways of realizing this construction were described: either the operator is left-adjacent to the verbal elements in the order V AUX, or the auxiliary alone is moved to the position right of the operator. The latter construction is more marked than the first one (and only described for the Navarrese-Lapurdian dialect; cf. Duguine & Irurtzun 2010).

It was shown that many more combinations of verbal elements following the operator exist. All of these follow the same pattern: the auxiliary is moved to the position right of the operator and can pied-pipe all or some other verbal elements to this position (the focus pivot). Those verbal elements that are not pied-piped stay in sentence-final position in most cases. Which elements can be pied-piped is determined by the internal structure of the cluster of verbal elements, which was found to be [V [SAI [ARI [AUX]]]].

No constituent, not even the otherwise very flexible adverbial, can occur inside the focus pivot and separate those verbal elements from each other.

For the marked construction, the focus pivot consisting of the auxiliary alone, it has been described that different constituents can separate the auxiliary from the lexical verb which is not part of the focus pivot (i.a. Laka 1996:10). This phenomenon has also been found for the other pivot patterns: constituents such as the adverbial or the non-focused NP can separate the pivot from those verbal elements that have not been pied-piped to pivot position.

The separation of the verbal elements in two different blocks makes it possible for the verb to function as focus pivot (indicating which constituent is focused), to mark the object as a part of the verb phrase (OV-unity is maintained), and to keep the verb in final position at the same time. The OV-unity could, however, not be shown to be a determining factor in the Donostian dialect. Another reason to split the verbal elements into two blocks can be to reduce the number of elements which have to be moved. This suggests that not only the number of movements, but even the 'heaviness' of a movement, i.e. how many elements are moved, make a construction more complex.

In some cases it was observed that the verbal elements that were left behind, i.e. that were not pied-piped to the pivot position, underwent an additional movement to the left. It has been suggested that extrapositions or afterthought of the elements on the right side of these verbal elements could be the reason for that.

Pied-piping is optional in the Hazparnian dialect, i.e. a focus pivot consisting of the auxiliary alone is permitted. This is not the case in the Donostian dialect, where the pivot consists of the auxiliary and at

least one more verbal element, i.e. pied-piping is obligatory here. Surprisingly, the two speakers of Andoain also used a pivot consisting of only the auxiliary. It was expected that this dialect was approximately the same as the one from Donostia, but obviously some major structural differences do exist. It is not possible to determine from this data if the semantics of this construction in Andoain coincides with the semantics described for the Hazparnian dialect.

It was found that the marked construction is used significantly more often for sentences with a subject operator than for sentences with an object operator. There are two possible explanations for this phenomenon: it might be that speakers chose to use the complete verbal chain as a focus pivot when the object was focused in order to maintain adjacency of object and lexical verb. If this is true, syntactic preferences would be stronger than semantics, as a standard focus would be used instead of the marked construction. This not inconceivable in the Hazparnian dialect, where the emergence of the in-situ construction already indicates that syntactic preferences can overrule discourse rules.

Another possible explanation is semantics itself: in the investigated data set the cleft-construction, which is similar to the marked construction in its semantics, is only used in sentences with a focused subject as well. This could mean that subjects more likely occur in a marked focus than objects do³². Another investigation would be necessary to show if this explanation holds. As the AUX-pivot occurs much more frequently than the cleft-construction, it is assumed that the cleft-construction is even more marked than the AUX-pivot.

Besides the verbal elements, the object can undergo movements to the left as well. It has been shown that this movement occurs more often in Donostia than in Hazparne, indicating that Hazparnian speakers have a greater preference for the order A>O. This is consistent with the finding that Hazparnian speakers generally have a higher affinity to basic word order and it indicates that the first position is not necessarily connected to topicalization in this dialect anymore.

The object is fronted more frequently in questions than in declaratives, which applies especially strongly to Donostia. This suggests a higher affinity to WH-fronting in the Donostian dialect. An effect of bilingualism could play a role here: in-situ questions are the norm in spoken French while they are rather exceptional in spoken Spanish. This leads back to the in-situ debate which shows again how closely interlaced all parts of syntax are and how difficult it is to investigate each part of grammar separately.

It can be concluded that the underlying syntactic word order is A O V for both dialects. For Donostian speakers, however, the information-structural word order Top Foc-V Tail is obligatory, which means that certain movements cannot be avoided. For Hazparnian speakers, on the contrary, the information-structural word order is not obligatory anymore, and the speakers have the choice between maintaining A O V and moving constituents in order to satisfy Top Op-V Tail.

³² I let both a French and a Swedish native speaker judge sentences with a clefted subject and a clefted object in their language. The Swedish speaker did not perceive any of the sentences as better. The French speaker, however, preferred the sentence with clefted subject (*C'est Pierre qui me voit; It is Pierre who sees me.*) to the sentence with clefted object (*C'est Pierre que je vois; It is Pierre I see.*) although he judged both sentences as grammatical. If clefted subjects really occur more frequently in French than clefted objects, an effect on Navarrese-Lapurdian Basque cannot be excluded.

It can furthermore be noted that no verb-initial word orders were found. These are supposedly very rare in Basque, but they have nonetheless been shown to occur (3 % in the data of De Rijk 1969:16). The simple explanation for the absence of any of these orders in the data is that the experiment was not designed to elicit them.

Structural priming was used to explain the frequency of structures which were not expected or not expected as frequently. It could relativize the frequency of some of these structures, but not explain their occurrence. It is important to note that although priming effects were only investigated for less expected structures, even frequently used structures can prime the even more frequent use of these structures contributing to the spread of structures like the in-situ construction.

5. Conclusion

This thesis showed that the word order in Basque is quite flexible but not free. The variation in word order is restricted by syntax, information structure, and economy. These factors affect the word order choices of the speakers of the two dialects to different extents. The existing pattern of variation can adequately be described as movement of simple chunks of structure throughout a fixed clause structure rather than by simple phrase re-ordering.

Syntactic rules

The verbal elements are embedded in the same way and undergo pied-piping in the same way in both dialects. However, pied-piping is optional in Hazparne and Andoain, while it is obligatory in Donostia.

In the Hazparnian dialect, there is a tendency to keep the object left-adjacent to the lexical verb, which was not found for the Donostian dialect.

There is a tendency to front the WH-word in both dialects, but this tendency is much stronger in Donostian than in Hazparnian.

Information structure

The focus is left-adjacent to the verb in both dialects. In Hazparnian, however, this is not obligatory anymore; the in-situ structure exists parallel to this structure.

The position left of the focus is occupied by the topic; however, this function seems to be less important in the Hazparnian dialect, where the subject takes this position much more frequently than expected.

Economy

In both dialects, movements are avoided as much as possible. In Hazparnian, this tendency is so strong that it can lead to a breach of the Galdegaia-rule. Donostian speakers seem to move constituents much more freely; for example they move the WH-word to the first position much more frequently.

In the Donostian dialect, on the other hand, the movement of heavy elements is avoided much more than in the Hazparnian dialect. They prefer moving only parts of the verbal elements to pivot position, even if the movement of all verbal elements could lead to the adjacency of OV.

This shows that the information-structural rules have been weakened in the Hazparnian dialect. Here, syntactical or economical factors seem to play a bigger role when deciding which word order to use. In the Donostian dialect, on the other hand, information-structural rules cannot be broken and all other factors have to submit to these rules. While the Donostian speakers clearly follow the word order Top Op-V Tail, the underlying word order Top Op-V Tail competes with the underlying word order A O V in the Hazparnian dialect. Hazparnian word order patterns are more complex as they are about to change: “a (partially) eroded object may be more complex to describe, since [...] the results on a fine-grained level are unpredictable, but also unpatterned” (Dahl 2004:72).

This study revealed certain patterns and contributed to answering specific questions, but it has also led to new questions. One field that has not been covered is semantics. It is not clear if the choice of focus pivot changes the semantics of the focus. We know that a focus pivot consisting of only the auxiliary is more marked than the standard focus in the Hazparnian dialect. We do not know, however, if the same applies to this construction in the dialect of Andoain, and we do not know which semantic meaning the pivots consisting of ARI AUX, SAI AUX or SAI ARI AUX bear. Other studies will need to be conducted to solve these questions.

It is also still open to investigation why both the marked and the cleft-constructions are used rather with a focused subject than a focused object. It would be interesting to carry out a cross-linguistic study to be able to determine if there is an influence from French and how other languages use their cleft-constructions.

Another interesting phenomenon is the ongoing change which can be observed for in-situ constructions. In order to determine if the change is happening in the suggested way, the speech of older and younger speakers could be compared. Both code-switching between French and Navarrese-Lapurdian, as well as first language acquisition could give important clues about how the construction is developing. As Basque speakers learn Batua at school and most media is in Batua, it would also be interesting to investigate the interaction between Navarrese-Lapurdian and Standard Basque.

It will also be necessary to validate the results of this study with more natural material. The optimal study would be a corpus study; however, it would be difficult to receive enough transitive sentences in which both subject and object consist of noun phrases. Another idea would be to continue with a question-answer based experiment, but to base the stimuli on an on-going story, so that every stimulus picture is embedded in a clear context. This would make the outcome more natural and it would also make it possible to determine the topic of the sentences. The study of topics and how they are realized in the new in-situ structure would also be a very interesting subject.

Another suitable topic for further research would be to study phonology and prosody in relation to the variation found in word order. It would be extremely interesting to compare the prosody of the two dialects and to compare the prosody of in-situ sentences in Hazparnian with sentences with traditional word order in the same dialect.

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Appendix

Appendix 1: Consent form in French

Merci beaucoup pour votre aide.

Information:

Vous participez aux enquêtes pour le mémoire d'Anne Goergens. La présentation de ce mémoire est prévu à l'université de Lund, en Suède, en juin 2014.

Je vais faire des enregistrements vidéo et audio ; ces enregistrements seront sauvegardés.

Les enregistrements seront sauvegardés dans une archive sécurisée. Ils seront accessibles aux autres chercheurs mais ils ne seront jamais publiés ou mis à la disposition du public sans votre accord.

Les analyses fondées sur le matériel seront publiées. Une fois mon mémoire terminé, je vais mettre les données à la disposition du projet LUNDIC, un projet linguistique de l'université de Lund.

Vous aurez à tout moment le droit d'accéder aux enregistrements et travaux de recherche qui seront fondés là-dessus.

La participation est bénévole et vous pouvez l'interrompre à tout moment.

Me permettez-vous de passer des extraits d'enregistrements dans le cadre des conférences scientifiques ? oui non

Souhaitez-vous être désigné nommément (dans les remerciements etc...) ou voulez-vous rester dans l'anonymat ? désigné nommément anonyme

Lieu et date Signature (informateur) Signature (Anne Goergens)

Si vous souhaitez recevoir mon mémoire une fois fini, écrivez votre adresse email ci-dessous :

Anne Goergens, Université de Lund, anne.goergens@ling.lu.se

Appendix 2: Consent form in Spanish

Gracias por su ayuda.

Información:

Usted está participando en una investigación para la tesis de Máster de Anne Goergens. Esta tesis será presentada en la universidad de Lund, Suecia, en junio de 2014. Voy a hacer grabaciones de video y audio. Las grabaciones quedarán guardadas en un archivo cerrado. Serán accesibles para otros investigadores en nuestros proyectos, pero nunca serán publicados, y nunca se harán accesibles al público. Solamente los análisis que resultan de las grabaciones se publicarán.

Cuando he acabado mi tesis de Máster, intento dejar las grabaciones a la disposición del proyecto lingüístico LUNDIC de la universidad de Lund.

Usted tiene siempre acceso total a sus grabaciones y a todas las obras científicas que se basan sobre estas grabaciones.

Su participación es totalmente voluntaria y usted puede interrumpir y acabar cuando quiera.

¿Permite usted que reproduzcamos ejemplos breves y anonimizados provenientes de sus grabaciones en conferencias científicas? O sí O no

¿Quisiera ser nombrado/-a en publicaciones (en reconocimientos etc.) o prefiere que su contribución quede anónima? O nombrado O anónimo

Lugar, fecha Firma (informante) Firma (Anne Goergens)

Si quisiera recibir mi tesis de Máster una vez terminada, escriba aquí su dirección de email.

Anne Goergens, Universidad de Lund, anne.goergens@ling.lu.se

Galdetegia

1. Berriemailearen zenbakia _____
2. Zein adin duzu? _____
3. Emakumea edo gizona zara? _____
4. Non hazi zinen? _____
5. Non bizi zara gaur egun? _____
6. Zein euskalki hitz egiten duzu? _____
7. Beste hizkuntzarik hitz egiten baduzu, zein? _____
8. Zure ustez, zein da ondoena hitz egiten duzun hizkuntza? _____
9. Zein da ondoena idazten duzun hizkuntza? _____

Zein hizkuntza hitz egiten duzu ondorengo pertsona hauekin...

10. ...gurasoekin? _____
11. ...anai-arrebekin? _____
12. ...bikotearekin? _____
13. ...seme-alabekin (haurrik baldin baduzu)? _____
14. ...lagunekin? _____
15. ...lanean? _____
16. ...hiriko dendetara joaten zarenean, saltzailearekin? _____
17. Zein hizkuntzatan egin dituzu ikasketak?

Euskaraz Gazteleraz Beste batean. Kasu honetan, zein hizkuntzatan? :

18. Zein hizkuntzatan egin dituzu unibertsitateko ikasketak?

Euskaraz Gazteleraz Beste batean. Kasu honetan, zein hizkuntzatan? :
 Ez dut egin unibertsitateko ikasketarik

19. Lagun bati euskaraz gutun bat idatzi beharko bazenio, nola idatziko zenioke?

Batuan nire euskalkian ez dut inoiz idazten euskarazko gutunik

20. Lagun bati euskaraz email bat idatzi beharko bazenio, nola idatziko zenioke?

Batuan nire euskalkian ez dut inoiz idazten euskarazko emailik

21. Lagun bati euskaraz SMS bat idatzi beharko bazenio, nola idatziko zenioke ?

Batuan nire euskalkian ez dut inoiz idazten euskarazko SMSik

22. Facebook-en euskaraz idazten baduzu, normalean nola egiten duzu...

Batuan nire euskalkian ez dut inoiz euskaraz idazten Facebook-en

Appendix 4: English translation of the background questionnaire

Background Questionnaire

1. Informant Number
2. How old are you?
3. Male/female
4. Where did you grow up?
5. Where do you live now?
6. Which Basque dialect do you speak?
7. Which other languages do you speak?
8. In your opinion, which language do you speak best?
9. In which language do you write best?

Which language(s) do you speak...

10. ...to your parents?
11. ...to your sisters and brothers?
12. ...to your partner?
13. ...to your children?
14. ...to your friends?
15. ...at work?
16. ...if you go to a shop in your town?
17. Which language(s) was your school education in? (Basque/French/Spanish/other)
18. Which language(s) was your university education in? (no university education/Basque/French/Spanish/other)

19. If you write a letter to a friend in Basque, do you write it in (Batua/your home dialect/
I never write letters in Basque)
20. If you write an email to a friend in Basque, do you write it in (Batua/your home dialect/
I never write emails in Basque)
21. If you write an SMS to a friend in Basque, do you write it in (Batua/your home dialect/
I never write SMS in Basque)
22. If you write on a friend's facebook in Basque, do you write in (Batua/your home dialect/
I never write on facebook in Basque)

Appendix 5: Instructions in French

Instructions Informateurs

En général :

Je suis intéressée par la langue informelle, la langue naturelle. Je suis pas un professeur et je ne suis pas intéressée par la langue correcte mais par la langue quotidienne comme vous l'utilisez à la maison, avec la famille et avec des amis. Alors, parlez comme d'habitude !

Tâche 1

La tâche a la forme d'un dialogue. L'un de vous va poser des questions, l'autre va répondre. En premier, vous verrez une image. Une chose est toujours cachée par un point d'interrogation. C'est la chose que vous voulez savoir, c'est la chose vous demandez. Il y a toujours deux mots là dans le coin que je veux que vous utilisiez.

Après avoir posé la question, vous cliquez ici. Et une autre image apparait, c'est la réponse. Maintenant vous voyez ce qui était caché et vous pouvez répondre la question. C'est important que vous fassiez des phrases complètes, et dans la question et dans la réponse. Pour la personne qui répond : ne décrivez pas seulement le photo mais répondez vraiment à la question !

On va maintenant faire quelques exemples, c'est seulement quatre questions et réponses. Vous pouvez demander si vous avez des questions. Je vais tester la caméra aussi.

N'oubliez pas de faire des phrases complètes !

Tâche 2

Maintenant un de vous va regarder quatre films très courts. Il va raconter à l'autre personne ce qu'il se passe pendant qu'il regarde.

Tâche 3

La prochaine tâche est en principe la même que la première mais on va changer. Alors, maintenant vous posez les questions et vous répondez. Rappelez-vous que c'est toujours la chose/la personne qui est

cachée derrière le point de question qui vous voulez savoir ! On va faire les exemples encore une fois, après vous aurez la possibilité de me poser des questions. N'oubliez pas de faire des phrases complètes !

Tâche 4

La tâche est un peu similaire à celle d'avant. Un de vous pose des questions, l'autre les répond. Je vous montre un exemple en français : La question est déjà écrite complètement alors vous devez seulement la lire. Après vous répondez avec le mot qui est écrit là-dessous. Comme réponse je voudrais quelque chose comme ça : « La femme qui frappe l'homme a le chapeau ». Si c'est compris, on peut commencer.

Tâche 5

Maintenant on va prendre les films encore une fois, cette fois, c'est vous qui racontez.

Tâche 6

Cette tâche est similaire à celle d'avant, on va juste échanger question-réponse. On va regarder l'exemple encore une fois. Vous avez des questions ?

Appendix 6: Instructions in English

Instructions informants

In general:

I am interested in the informal language, the natural language. I am not a teacher and I am not interested in correct language but in the every-day language as you use it at home, with your family and friends. So, just talk as normally!

Task 1

The task is in form of a dialogue. One of you will ask questions, the other one will answer. At first, you will see a picture. Something is always hidden by a question mark. That's what you want to know, that's what you are asking for. There are always two words in the corner there which I want you to use.

After having asked the question, you click here. Another picture appears, that's the answer. Now you can see what was hidden and you can answer the question. It is important that you make complete sentences, both in the question and in the answer. For the person that is answering: do not only describe the photo but really answer the question!

Now we will go through some examples, it is only four questions and answers. You can ask if you have questions. I will also test the camera.

Don't forget to make complete sentences!

Task 2

Now one of you will watch four very short films. S/he will tell the other person what is happening while s/he is watching.

Task 3

The next task is almost the same as the first one, but you will change roles. So, now you ask the questions and you answer. Remember that it is always the thing/person behind the question mark you want to know! We will go through the examples one more time, after that you have the possibility to ask me questions. Don't forget to make complete sentences!

Task 4

This task is a bit similar to the one before. One of you asks questions, the other answers. I will show you an example in Spanish: The question is already written completely, so you only have to read it. You answer with the word that is written under here. As an answer I would like to have something like this: "La mujer que golpea al hombre tiene un sombrero." If it is clear, we can begin.

Task 5

Now we take the films once more, this time, it is you who tells.

Task 6

This task is similar to the one before, you will just swop question-answer. We will watch the example once more. Do you have any questions?

Appendix 7: All word orders

The used sentences in the analysis (in total 910 sentences) can be seen in Table 10, Table 11, and Table 12. There is an imbalance between sentences with subject and object in focus because the sentences with an object in focus were designed as control sentences in the original ambiguity study.

Table 10: Event-reporting questions and answers

Focus	Neutral: 204											
Sentence type	Question: 102						Answer: 102					
Pattern	V AUX 55		ARI 47		V AUX 53		ARI 40		SAI 4		ARI SAI 5	
Dialect	D 23	H 32	D 15	H 32	D 19	H 34	D 13	H 27	D 1	H 3	D 5	H 0

Table 11: Sentences with focused subject

Focus	Subject: 512															
Sentence type	Question: 256								Answer: 256							
Pattern	V AUX 131		ARI 63		SAI 31		ARI SAI 31		V AUX 128		ARI 62		SAI 26		ARI SAI 40	
Dialect	D 50	H 81	D 29	H 34	D 6	H 25	D 22	H 9	D 49	H 79	D 29	H 33	D 0	H 26	D 29	H 11

Table 12: Sentences with focused object

Focus	Object: 194															
Sentence type	Question: 97								Answer: 97							
Pattern	V AUX 54		ARI 20		SAI 11		ARI SAI 12		V AUX 52		ARI 21		SAI 8		ARI SAI 16	
Dialect	D 17	H 37	D 7	H 13	D 2	H 9	D 7	H 5	D 17	H 35	D 7	H 14	D 0	H 8	D 9	H 7

Table 13: All word orders sorted by categories

Categories and occurring verbal elements	Donostia	Hazparne
neutral	76	128
Declaratives	38	64
V AUX	19	34
A O V AUX	18	34
A V AUX O	1	
V ARI AUX	13	27
A ARI AUX O V	2	9
A O V ARI AUX	11	18
V SAI AUX	1	3
A O V SAI AUX	1	1
A SAI AUX O V		2
V SAI ARI AUX	5	
A ARI AUX O V SAI	2	
A O V SAI ARI AUX	3	
Questions	38	64
V AUX	23	32
S _{WH} AUX V	3	1
S _{WH} V	4	
S _{WH} V AUX	16	31
V ARI AUX	15	32
S _{WH} ARI AUX V	7	4
S _{WH} V ARI AUX	8	28
A-operator	214	298
Declaratives	107	149
V AUX	49	79
A _{FOC} AUX O V		36
S _{FOC} COP O V PRED		1
A _{FOC} AUX V O		6
A _{FOC} O V AUX	5	13
A _{FOC} V AUX O	43	19
O A _{FOC} AUX V		1
O A _{FOC} V AUX	1	3
V ARI AUX	29	33
A _{FOC} ARI AUX O V	28	18
A _{FOC} AUX O V ARI		9
S _{FOC} COP O V ARI PRED		1
A _{FOC} O V ARI AUX		4
A _{FOC} V ARI AUX O		1

O V A _{FOC} ARI AUX	1	
V SAI AUX		26
A _{FOC} AUX O V SAI		5
S _{FOC} COP O V SAI PRED		4
A _{FOC} AUX V SAI O		1
A _{FOC} O V SAI AUX		1
A _{FOC} SAI AUX O V		15
V SAI ARI AUX	29	11
A _{FOC} ARI AUX O V SAI	20	1
A _{FOC} ARI AUX SAI O V	5	1
A _{FOC} ARI AUX SAI V O	2	
A _{FOC} ARI AUX V SAI O	1	
A _{FOC} AUX O SAI V ARI		1
A _{FOC} AUX O V SAI ARI		2
A _{FOC} O V SAI ARI AUX	1	2
A _{FOC} SAI ARI AUX O V		2
O A _{FOC} V SAI ARI AUX		1
O V SAI ARI PRED S _{FOC} COP		1
Questions	107	149
V AUX	50	81
A V AUX O	1	
A _{WH} AUX O V	2	34
A _{WH} AUX V O		3
A _{WH} O V AUX		7
A _{WH} V AUX O	44	35
A _{WH} V O	1	
O A _{WH} AUX V		1
O A _{WH} V AUX	2	1
V ARI AUX	29	34
A _{WH} ARI AUX O V	25	23
A _{WH} ARI AUX V O	2	
A _{WH} AUX O V ARI		7
S _{WH} COP O V ARI PRED		1
A _{WH} O V ARI AUX		2
A _{WH} V ARI AUX O	2	1
V SAI AUX	6	25
A _{WH} AUX O V SAI	2	6
S _{WH} COP O V SAI PRED		1
A _{WH} AUX SAI O V		1
A _{WH} O V SAI AUX		1
A _{WH} SAI AUX O V	3	13

A _{WH} SAI AUX V O	1	2
A _{WH} V SAI AUX O		1
V SAI ARI AUX	22	9
A _{WH} ARI AUX O V SAI	12	1
A _{WH} ARI AUX SAI O V	3	
A _{WH} ARI AUX V SAI O	4	
A _{WH} AUX O V SAI ARI		2
S _{WH} COP O V SAI ARI PRED		2
A _{WH} AUX SAI ARI O V		1
A _{WH} SAI ARI AUX O V	2	2
A _{WH} SAI ARI AUX V O	1	
O A _{WH} V SAI ARI AUX		1
O-operator	66	128
Declaratives	33	64
V AUX	17	35
A O _{FOC} AUX V		4
A O _{FOC} V AUX	11	28
O _{FOC} V AUX A	6	3
V ARI AUX	7	14
A ARI AUX O _{FOC} V	2	1
A ARI AUX V O _{FOC} V	1	
A O _{FOC} ARI AUX V	1	
A O _{FOC} V ARI AUX	1	11
O _{FOC} ARI AUX V A	1	
O _{FOC} V ARI AUX A	1	2
V SAI AUX		8
A O _{FOC} V SAI AUX		4
A SAI AUX O _{FOC} V		3
O _{FOC} V SAI AUX A		1
V SAI ARI AUX	9	7
A ARI AUX SAI V O _{FOC}	1	
A O _{FOC} V SAI ARI AUX	4	6
O _{FOC} ARI AUX A V SAI	2	
O _{FOC} ARI AUX V SAI A	1	
O _{FOC} V SAI ARI AUX A	1	1
Questions	33	64
V AUX	17	37
A O _{WH} AUX V		7
A O _{WH} V AUX	5	14
O _{WH} AUX A V	1	1
O _{WH} V A	1	

O _{WH} V AUX A	10	15
VARI AUX	7	13
A O _{WH} ARI AUX V	2	1
A O _{WH} V ARI AUX		8
O _{WH} ARI AUX A V	1	
O _{WH} ARI AUX V A	3	1
O _{WH} V ARI AUX A	1	3
VSAI AUX	2	9
A O _{WH} SAI AUX V		1
A O _{WH} V SAI AUX	1	4
O _{WH} AUX A V SAI	1	
O _{WH} SAI AUX V A		1
O _{WH} V SAI AUX A		3
VSAI ARI AUX	7	5
A O _{WH} ARI AUX V SAI	3	
A O _{WH} V SAI ARI AUX	1	3
O _{WH} ARI AUX A V SAI	1	
O _{WH} ARI AUX V SAI A	1	
O _{WH} SAI ARI AUX A V	1	
O _{WH} V SAI ARI AUX A		2
Total	356	554

Appendix 8: Sentence-final elements

Table 14: Sentence-final elements

	Donostia	Hazparne	Total
neutral			
Declaratives	38	64	102
DAT	2.63%	0.00%	0.98%
O	2.63%	0.00%	0.98%
V	5.26%	17.19%	12.75%
V (SAI) (ARI) AUX	84.21%	82.81%	83.33%
V SAI	5.26%	0.00%	1.96%
Questions	38	64	102
V	36.84%	7.81%	18.63%
V (SAI) (ARI) AUX	63.16%	92.19%	81.37%
A-operator			
Declaratives	107	149	256
ARI AUX	0.93%	0.00%	0.39%
AUX	0.00%	0.67%	0.39%
O	43.93%	18.12%	28.91%
V	29.91%	48.99%	41.02%

V (SAI) (ARI) AUX	6.54%	16.11%	12.11%
V (SAI) (ARI) PRED	0.00%	4.03%	2.34%
V ARI	0.00%	6.71%	3.91%
V SAI	18.69%	4.03%	10.16%
V SAI ARI	0.00%	1.34%	0.78%
Questions	107	149	256
O	52.34%	28.19%	38.28%
V	32.71%	50.34%	42.97%
V (SAI) (ARI) AUX	1.87%	8.05%	5.47%
V (SAI) (ARI) PRED	0.00%	2.68%	1.56%
V ARI	0.00%	4.70%	2.73%
V SAI	13.08%	4.70%	8.20%
V SAI ARI	0.00%	1.34%	0.78%
O-operator			
Declaratives	33	64	97
A	30.30%	10.94%	17.53%
O	3.03%	0.00%	1.03%
V	12.12%	12.50%	12.37%
V (SAI) (ARI) AUX	48.48%	76.56%	67.01%
V SAI	6.06%	0.00%	2.06%
Questions	33	64	97
A	48.48%	39.06%	42.27%
V	15.15%	15.63%	15.46%
V (SAI) (ARI) AUX	21.21%	45.31%	37.11%
V SAI	15.15%	0.00%	5.15%